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PHYSICAL SIGNS OF PLEURAL EFFUSION.*

WILLSON O. BRIDGES, M.D.

Professor of Medicine, University of Nebraska.

OMAHA.

Fourteen years ago I treated a young man with croupous pneumonia of severe though characteristic type. Crisis occurred on the seventh day, but the temperature did not reach the normal. Resolution did not become complete in the solidified area, the cough and expectoration increased, the fever gradually rose to 102, and there was persistence in the dull area with bronchial respiration and subcrepitant râles. He developed night sweats without chills. The expectoration was mucopurulent, occasionally tinged with blood, and in the presence of a family predisposition to tuberculosis, I felt convinced of a development in this direction. For two months there was scarcely any variation in the physical signs of consolidation; he became considerably emaciated, and I was at sea, because repeated microscopic examination failed to reveal the presence of tubercle bacilli in what appeared to be quite characteristic sputum. It then occurred to me to explore the affected area with the needle, when the diagnosis of empyema was at once revealed, an operation performed and my patient went on to complete recovery, and he is still in good health.

Since that time it has been my fortune to meet with at least ten cases in consultation, in which a diagnosis of either pulmonary tuberculosis or chronic pneumonia had been made, where exploration showed neither to exist; and one experience was narrated to me by an undertaker, where, in preparing a body for final disposition, he found the pleural cavity full of pus.

A number of years ago, when attending at St. Joseph's Hospital, a case of heart disease was sent into my ward with a communication that the patient had reached the limit of cardiac compensation and needed to be cared for in a comfortable place until the end. Examination plainly indicated mitral disease, with very feeble heart action, general anasarca and pronounced classical signs of an effusion filling the right pleural cavity. Over three pints of serous fluid were aspirated, prompt relief to orthopnea resulted, and under stimulation cardiac compensation became restored, and the patient left the hospital in a few weeks in a much-improved condition.

About three years ago my attention was called to a young woman in the Methodist Hospital who had stopped there to rest for a few days on her way South from northern Nebraska, where she had been sent on account of supposed pulmonary tuberculosis. On examination she presented the typical signs of pleural effusion, reaching to the third rib on the right side. Nearly two quarts of serofibrinous fluid were slowly aspirated, the lung expanded at once, and during the ten days to two weeks she was kept under subsequent observation, there was no return of the effusion, the lungs were free from indication of involvement, and she returned to her home, instead of going South, a well and much-surprised patient.

Three weeks ago a boy 7 years of age appeared in my office with his parents on their way with him to visit in the country, where they felt a change of air would enable him to better throw off the debilitating effects of whooping cough, which he had last spring. He had not been confined to bed, was thought not to have had fever, but his appetite was not good. He was disinclined to play, and a slight dry cough had persisted most of the time since the whooping cough. He had not been examined by a physician, but the mother had given him various tonics. The father was known to me as having had suspicious tubercular pulmonary trouble, and I requested a thorough examination of the boy. The physical signs were atypical, and I will give them in detail. On inspection, the right side was seen to move less freely than the left, the intercostal spaces were slightly more prominent, the apex of the heart was seen to pulsate an inch and a half to the left of the normal but in the same horizontal line. Litten's phenomenon was absent on the right side. On palpation, distinct vocal fremitus was noted on the right side in areas less marked than the opposite corresponding. On percussion, there was marked dullness over the entire right chest up to the third rib. On auscultation, bronchial respiration and bronchophony were distinct over this area, but perhaps distant somewhat, puerile respiration was noticeable on the left side, and there was no cardiac murmur. The breath sounds over the right lung and the presence of the vocal fremitus with dullness rather than flatness, were suggestive of consolidation or tumor involvement of the lung. The displacement of the heart apex in the absence of a murmur and kidney disease and the fullness of the intercostal spaces were suspicious signs of an effusion. The history was toward an effusion. The aspirating needle was introduced in the seventh space in the axillary line, and three pints of serofibrinous fluid withdrawn. The lung expanded promptly, the heart apex resumed its normal position, and during the ensuing week there was no return of the fluid.

DEDUCTIONS FROM CASE REPORTS.

These cases illustrate two points which I wish to make: First, that cases of pleural effusion may present atypical physical signs, which are misleading; and, sec-

* Read before the Burt County Medical Society at Oakland, Neb.

ond, that in quite a proportion of cases, the chest is not sufficiently examined by the attending or consulting physician, and consequently the lesion escapes detection. Effusions in the pleural cavity may be inflammatory or non-inflammatory. The inflammatory are serofibrinous, seropurulent, and may be hemorrhagic. They arise from pleurisy, acute or chronic, pleuropneumonia, pulmonary tuberculosis, pericarditis, and as complications of the infections. The non-inflammatory are cases of so-called hydrothorax, and result from interference with the circulation, as in organic heart disease, venous thrombosis within the chest cavity, chronic pulmonary disease, intrathoracic tumors, and also from chronic Bright's disease, diabetes and the dyscrasiæ. The physical signs are usually similar in both classes, but they are less apt to be typical in the inflammatory, for here great thickening of the pleura, localized adhesions, the existence of pulmonary consolidation, communication with a bronchus (pathologic states which may exist) interfere with the production of conditions on which the typical signs are based. Then, too, the signs will vary somewhat, according to amount of effusion within the cavity. It is stated that at least a pint must be present in order that it may be detected, and from this amount to a full cavity, which will exert displacement of adjoining organs to the maximum, great variation must be expected.

It is not my purpose to go over all the detailed text-book physical signs of pleural effusion, but rather to call attention to two signs not found in most text-books, and to point out variations from the typical, which I believe are more common than we were taught, and consequently responsible for many errors by those who are inclined to hard and fast rules.

THE INTERCOSTAL PHONATION PHENOMENON.

On inspecting the normal chest in other than the obese, it will be noticed that when the person observed speaks short words, or syllables, there is distinct elevation of the intercostal spaces. This is more distinctly seen where the spaces are widest in the lower latero-anterior part of the chest. The phenomenon was first described by Weiz, and is suggested as a recent diagnostic sign by Stiller. It results from wave currents of air, which are sent in all directions down the bronchial tree during phonation when the glottis is narrowed, and carried to the lung substance adjacent to the intercostal spaces where bulging is produced. Abrams states that the phenomenon is intensified if the patient closes the nostrils and covers the mouth during phonation. According to Stiller, this phenomena enables one to clearly indicate the boundary line between the lungs and liver or spleen, and to differentiate between a pleural effusion and solidified lung or tumor. If fluid exists in the pleural cavity, the increased pressure in the adjacent lung during the act of phonation results in waves being communicated to the fluid which bulges the intercostal spaces. In consolidation of lung contiguous to the chest wall, this could not occur. The objection offered to this sign is that it is not observable in obese persons.

THE PHRENIC SHADOW TEST.

The Litten phenomenon was first suggested in 1892 by Litten, and is a phrenic shadow, normally seen under proper relations of light to the chest wall. To elicit it, place the patient in the recumbent position with the chest and upper abdomen bared, and the feet toward a window or other strong light. Cut off all side and cross lights. The observer, now with his back to the window and beside the patient, may notice that with each deep act of inspiration, a narrow shadow starting at the anterior axillary line and seventh rib descends obliquely forward to cross the seventh, eighth and ninth ribs, and to recede with less distinctness during each act of expiration. It is equally noticeable on the two sides, and occasionally in the epigastrium. This shadow phenomenon simply represents a receding of the diaphragm from the ribs during inspiration. It is invariably manifest in health, but is more pronounced in thin persons and those who can take deep inspirations. Its presence signifies normal relation of the lung and diaphragm to the chest wall and normal function. Its absence signifies the opposite. Its absence, therefore, is a marked physical sign of pleural effusion, and is noted as soon as there is sufficient fluid in the cavity to alter the normal relation between the lung and diaphragm and the chest wall. Taken in connection with the intercostal phonation phenomenon, we have a valuable combination of physical signs to aid us in differentiating between pleural effusion and pneumonia.

HEART DISPLACEMENT.

Displacement of the heart occurs in pleural effusion of any magnitude, away from the affected side, but in suspected right-sided effusions we must rule out hypertrophy of the left ventricle as a factor in the abnormal location of the apex and in suspected left-sided effusions hypertrophy of the right ventricle. We are aided materially, of course, by excluding any cause for hypertrophy as valvular murmurs, chronic Bright's disease, hepatic cirrhosis, arteriosclerosis, etc. An error may result in the interpretation of a displaced apex to the left, which is not above its normal transverse line, but it is to be remembered that the whole heart may be displaced by a large effusion, and not only its apex. When the apex only is displaced to the left, it is located at a higher point than the normal.

VOCAL FREMITUS.

We are taught that the absence of vocal fremitus is the rule over large effusions, and that it is very much enfeebled or lessened in smaller ones. It should be remembered in this connection that the voice vibrations are more pronouncedly felt, as a rule, over the right chest in health, and that in case of suspected effusions in the left cavity, a diminished vocal fremitus on the affected side would be of less significance. This sign is directly affected by the strength and pitch of the voice, and is of greater value in men than women, and least of all in children. In fact, vocal fremitus may be pronounced over a large effusion in children, as was stated in my last case reported above, and I have several times noted it over purulent effusions complicating or following pneumonia. The explanation for this exception is a supposed transmission of the voice vibrations from the lung along pleural bands of adhesion to the chest wall or from the sound side by means of the chest wall itself. These exceptional cases are very confusing.

PERCUSSION.

The percussion note over pleural effusion will vary materially according to the amount of the fluid present. The first dullness is noticed at the posterior base, and as the fluid increases it becomes more marked. When the level of the fluid has reached the fourth rib in front, the percussion signs are characteristic. There is dullness below the level of the effusion, progressing to abso-

lute flatness toward the base. Above the fluid will be noticed Skoda's tympanitic note. With the patient in a semi-reclining position this sign is marked in the infraclavicular region, and is important. When the patient is erect, the upper line of dullness is not level, but is higher behind and to the side than in front, forming an irregular parabolic curve. This is most pronounced in medium effusions. In very large ones the curve becomes obliterated.

Alterations in the location of dullness with the change of posture is more noticeable also in moderate accumulations, and is often absent in effusions complicating or following pneumonia on account of pleuritic adhesions. When seeking for alterations in dullness, it is to be remembered that the fluid gravitates slowly with the change of posture of the patient and too quick comparison is to be avoided. In right-sided effusions the liver dullness may extend far below the normal and in left pleural effusions the semilunar space of Traube gives up its tympanitic note to flatness.

AUSCULTATION.

As the fluid accumulates the breath sounds grow feeble and distant; normal respiration often gives way to indistinct bronchovesicular, which is followed by bronchial breathing. Above the level of the fluid the breathing is bronchovesicular. In these cases there may be bronchophony, and this combination of auscultatory signs in small or medium effusions are often apt to lead one away from pleural effusion, especially so in children, where they are most commonly found. The bronchial breathing of pleural effusion differs somewhat from that over consolidation in seeming to be more distant and less distinct. In large effusions the signs on auscultation vary with the degree of compression of the lung. In these the breath sounds entirely disappear, with the exception of bronchial respiration, which is heard over a limited area in the interscapular region corresponding to the compressed lung. Baccelli pointed out that the whispered voice is sometimes transmitted through a serous effusion, but not heard through pus. Moist râles are exceptionally heard over an effusion, and are said to be usually of bronchial origin. I have observed them more in cases of purulent effusion communicating with a bronchus.

EXPLORATION.

In suspected cases of pleural effusion in which, owing to the atypical physical signs, definite conclusions can not be reached, the resort to the exploring needle when properly selected clears up the uncertainty. Such cases are more apt to be of the inflammatory type complicating or following pneumonia, and not infrequently are localized effusions, in which the greatest care is needed to properly find the limitations of the area in which physical signs may be found.

In my experience none but the largest needle of the aspirating cases should be used for exploration, excepting, possibly, in suspected hydrothorax, and even here the largest is the most to be depended on. I have been disappointed a number of times not to find fluid even with the largest needle, where fluid existed, and I recall a case seen within the year in which, after two unsuccessful attempts with the large needle, I was so satisfied of the existence of fluid from the history plus atypical signs that I introduced a good-sized trocar and canula at the point of needling, and a serofibrinous effusion was immediately demonstrated.

THE PREVENTION OF TYPHOID FEVER.

RUFUS I. COLE, M.D.

Instructor in Medicine, Johns Hopkins University; Assistant Resident Physician, Johns Hopkins Hospital.

BALTIMORE.

To infected water have been attributed the approximately 200,000 cases of typhoid fever which occur each year in this country. But it is the old story of the innocent blamed while the guilty escape.

It required almost three centuries of fighting, from Francisco Redi to Pasteur, before the theory of spontaneous generation could be overthrown. To-day, though the proof is certain that only from one case of typhoid is another begotten, we close our eyes to the truth, and go on acting as though water were the source of all typhoid infection.

To stamp out typhoid fever, in the absence of any specific treatment, requires (1) the recognition of all cases, and (2) the destruction of all typhoid bacilli as they leave the patient. The process need not even be so complete; *most* may be substituted for *all*. Though the water supply contain as much sewage as Chicago River, or be as foul as Jones' Falls, if no typhoid bacilli get into it it can not cause typhoid fever. We hear so much of the association of typhoid fever and water that we almost come to believe that it is their natural habitat, that it must be a war of expulsion. As a matter of fact, while typhoid bacilli may live for a considerable time in water, they do not thrive there, and under ordinary circumstances die out within a comparatively short time. I realize fully that this is a general statement to which some may raise objection. It is impossible in this paper to go into all the evidence on this question. Whether typhoid bacilli may live two weeks or two months, or even longer, in water, is immaterial. It can not be proved that outside of the body, under ordinary circumstances, typhoid bacilli thrive and multiply.

It is also probable, as Dr. Welch has pointed out, that the infectiousness of water or any infected material is directly proportional to the number of typhoid bacilli it contains. It can not be supposed that every one who takes typhoid bacilli into his stomach will develop typhoid fever. Not long ago I had fairly good proof of this. A new laboratory janitor, in spite of careful instructions and warnings, was found to be washing tubes containing typhoid bacilli before sterilizing them, in order to lessen his labors. He had done this for two days before he was discovered. His hands must have been covered by millions of typhoid bacilli, and while eating, and in other ways, he must have conveyed many to his mouth.

For infection to occur in typhoid fever, probably two conditions must be present: first, a lowered resistance on the part of the patient, and second, a sufficient number of infecting organisms. With a disease like typhoid fever, in which the strongest and healthiest are attacked, it is difficult to determine the factors which cause this lowered resistance. Some have said that sudden overexertion may reduce the resistance of the strong and healthy. But the proof rests only in isolated observations and is not sufficient. Possibly chance may play a part, slight injuries to the intestinal mucosa being required. The work of Dr. Ravenel, showing that tubercle bacilli may pass through the intact intestinal mucous membrane and enter the lymphatic channels, is evidence against this view.

But however this may be, for the bacilli to enter in sufficient numbers to cause infection they must wage a

strong battle from the time they leave one patient until they enter the next. They must battle with cold, with sunshine, struggle with millions of opponents, and then run a very slight chance of entering susceptible subjects. The vast majority must die.

But suppose from a given patient a million bacilli enter the uncontaminated general water supply each day. With the great dilution and factors unfavorable to the life of the bacilli there is only a chance that one person may be infected. One person becoming infected, if the bacilli from this one are destroyed before they enter the water supply, the chances of others becoming infected are no greater than they were before, and possibly no further cases will occur. But, if a second million of bacilli from this patient are also allowed to daily enter the water supply, the chances for further infection are twice as great. Instead of a possibility of one infection occurring, there is a possibility of two. Again this infection occurs, and if no precautions are taken the chances become four times as great. Thus the chances multiply by geometrical proportion—and the epidemic is started.

There are three ways to prevent the second infection: First, have a water supply from such a source and so guarded that it is impossible for the bacteria to enter it. Second, sterilize all water before it is consumed by the public. Third (and this is the one that it has taken the members of the medical profession longest to recognize), destroy all bacilli as soon as they leave the patient.

That a very small proportion of the cities and towns of this country have a water supply inaccessible to contamination, the widespread prevalence of typhoid fever testifies. To remove bacilli from water requires either expensive filtration plants, which are notoriously uncertain, or compelling all people to boil the water before using. In America to compel is difficult. The third way is the way open to the physician, and here we have neglected an opportunity and our duty.

The advantage of a good clean water supply can not be overestimated, but this is valuable entirely apart from the question of typhoid fever. So long as typhoid bacilli are being scattered about and any possible source of contamination for a water supply exists, however pure the water may be, the danger of infection and of epidemics is not removed. In ultimately preventing and stamping out this great plague in this country, other measures are necessary beside the obtaining of a fair water supply for our cities. In Chicago it is estimated that $36,000,000 have already been spent in the attempt to obtain a good water supply. There is still the opportunity for contamination by the sewage from a vast area of the city, and it is calculated that the expenditure of $32,000,000 more will be necessary before the water may be considered safe.[1] With the interest on this vast amount of money almost the air from each patient could be sterilized!

Let us now leave out of consideration the conditions in the cities, where the water supply is directly under public control, and consider the conditions in the country. In the paper of Dr. Fulton, the overwhelming evidence is adduced that typhoid fever exists to a proportionately greater extent in the country than it does in the city, and that the propagation of this disease is in general from the country to the town, and not from the town to the country. In Baltimore, in the Johns Hopkins Hospital at least, we are in the habit of inquiring of the patients (if they are not admitted from the suburban villages, as many of them are) when they were last in the country and where they drank water there. In the water supply of a large city the chances for dilution of the contaminating fluids is so much greater than in the country, where the privy vault is often in such close proximity to the well.

But through the water is not the only way in which the typhoid infection is spread. Some maintain that it is not the most common way. They insist that the ultimate proof must rest with the demonstration of the typhoid bacillus in the water. As is well known, this is difficult. One writer during the past year claimed that there has been undoubted proof of the occurrence of typhoid bacilli in drinking water only six times. This demonstration, however, is not necessary. There is ample proof on epidemiologic grounds that typhoid bacilli are most frequently transmitted from one patient to another through water. The proof is just as good that other methods play an important though not so frequent rôle. There is undoubted evidence that the bacilli may be carried by milk, oysters, uncooked vegetables, etc. Great stress has been laid on the probability of flies carrying the infection. Many cases undoubtedly arise by direct infection. Within the past few months there have been five members of one family treated in this hospital for typhoid fever. There are no other cases in the neighborhood of their home, and they had all been drinking city water. Certainly these can not all be cases of water infection.

From all this it is evident that we can not depend on water purification alone to stamp out this disease. Other measures are necessary, and it is the duty of the physicians to set these other procedures in operation.

It has been insisted on by many writers that the first essential in prophylaxis is correct diagnosis. Ever since the Spanish-American War and the exposure of the mistakes made in the diagnosis of typhoid fever, it has been the fashion to heap abuse on the physicians of this country for failure to recognize this disease. No doubt the condition is bad enough, and probably faulty teaching is to blame. But conditions are improving. Possibly one of the most valuable results of the war was this lesson to the physicians. The perfection of bacteriologic methods, the methods of cultivating the bacilli from the blood and stools, the Widal test, have made possible the making of a positive diagnosis in every case, and there can be no doubt that these methods should be employed much more generally than they are at present. Especially is this true on account of the importance of exact diagnosis with regard to prophylaxis. One of the most common mistakes is the failure to recognize typhoid fever in children.

But it is not necessary to wait for exact positive diagnosis before instituting prophylactic measures. Dr. Osler has said that, north of Mason and Dixon's line, every continued fever, not yielding to quinin in six or seven days, should be considered typhoid, until definitely ascertained to be something else. For prophylaxis it is better to go a step farther, and not wait for six or seven days, but, both above and below Mason and Dixon's line, whenever there is a suspicion that typhoid fever is present, prophylactic measures should be inaugurated. These measures do not cause any great hardships. They may cause some slight inconvenience, but so do all preventive measures. Does general vaccination cause no inconvenience? Does the retention of a great ship full of people at quarantine, because there is one case of small-

1. Jordan: THE JOURNAL A. M. A., vol. xxxix. p. 1561.

pox aboard, result in no discomfort? The inconvenience and discomfort entailed in combating typhoid is not to be compared with that necessary in stamping out most of the infectious diseases.

There is no doubt that there should be much greater care in the diagnosis. Even though at present one-half the cases are not recognized, that does not lessen the responsibilities of the physicians who do make proper diagnoses. It is probable that three-fourths of the cases, at least, are treated by physicians, and in three-fourths of these there is a suspicion that typhoid fever is present, even though a positive diagnosis is made in only one-half or even fewer of the cases. If we were honest and fearless enough to start prophylactic measures as soon as the suspicion arises, over one-half of all cases could be prevented from doing harm to others. But, whatever the proportion, the danger in a community is directly proportional to the number of cases existing. Possibly one case may infect a city, but in general it is not so. It is not only the great epidemics that need to be combated, but the cases occurring in succession. In a large part of this country typhoid fever never dies out. Even in the great epidemics the onset is usually not sudden. One case begets another; there is no spontaneous generation.

We are so in the habit of calling the kettle black; we complain so much about mistaken diagnoses that we neglect prophylaxis in the cases where we have made a diagnosis, or above all, in those in which we have only suspicions. Perhaps it is beyond the range of possibility to recognize every case; the best clinicians occasionally make the diagnosis on the autopsy table. Other cases, too, walk about and never consult a physician. But with proper prophylaxis in the recognized cases, cases will become fewer and fewer, and at the same time the atypical cases will become more rare. Even though some cases escape recognition, it does not seem too much to hope that the disease may ultimately be stamped out from any community and from the country.

There is much talk of the necessity of control by the health boards, for notification laws. This will be of the greatest value in controlling the black sheep of the profession who fail to do their duty. We trust and believe they are few. The physicians of the country should not need to be compelled to do that which is so obviously for the benefit of the community. At any rate, they should be the ones to inaugurate the reforms. We have waited long for the health boards to obtain the necessary authority. The active reform on the part of the physicians will aid in bringing the necessary legislation about. But the procedures necessary are not those which would be easy to compel the people to carry out. What the government never can do, the attending physician can accomplish by proper instruction, advice and directions.

What are the necessary procedures? Simply sterilize the excretions as they leave the patient. In what other infectious disease is the prophylaxis so simple and the means so readily within our power? Compared with tuberculosis or the exanthemata, the difficulties melt into insignificance. Nevertheless, although we know the cause of this disease, we know how this agent leaves the body, we know that its destruction at once will prevent other cases, yet, because those in the immediate surroundings of the patient are not ordinarily directly affected, we are apathetic. But the persons in the immediate environment are in danger—not so great as with the exanthemata—but still in danger of infection, and this fact should be more strongly impressed on students and on the public. The constant teaching that typhoid fever is infectious, but not contagious, has tended to cause students to play with words and overlook the real conditions. Of course the greatest danger of a typhoid patient is to the community at large, and, since that is so, the family of a patient must be urged to exert themselves. If a case of scarlet fever occur in a house, the whole house is disarranged, an isolation hospital is improvised, the food is passed in to the nurse through an outside window; the greatest precautions are observed. But with typhoid all is different. "It is infectious, but not contagious"! The discharges loaded with typhoid bacilli are thrown into the sewer, to be carried possibly back to the water supply, or they are thrown into the privy vault to pass into the nearby well. The urine may be thrown on the ground to contaminate all it touches. The soiled bedclothes contaminated by feces are handled by a half dozen persons before they reach the laundry. The nurse's hands are contaminated by urine and feces, and the bacilli are widely distributed. When one considers the chances for infection the wonder becomes that typhoid is not more prevalent.

The carelessness and apparent ignorance of physicians and students in regard to this is surprising. Students who work with typhoid bacilli in the bacteriologic courses will take every precaution in case a drop of pure culture of typhoid bacilli gets on the hands or furniture. But when this student comes into the hospital wards or treats a case of typhoid fever, he will, in examining the urine, spill it over his hands and over the floor and never think of taking proper measures for disinfection. Notwithstanding all that has been written on the presence of typhoid bacilli in the urine, students have not yet realized the truth.

I have made cultures from the urine during the past few years, and in about one-third of the cases typhoid bacilli have been cultivated. Other observers have found them present in from 20 to 35 per cent. of the cases. Sometimes they are in enormous numbers. Horton-Smith estimated in one case 500,000,000 per cubic centimeter. Not infrequently they can be seen by the naked eye; that is, when a test tube containing the urine is held up to the light a turbidity and shimmer is seen, which is entirely due to the suspended bacilli, and is similar to that seen in bouillon cultures or suspension of the bacilli. In the majority of cases the bacilli in the urine give rise to no bladder symptoms; the condition is a bacilluria, not a cystitis. The bacilli may appear in the urine at any period of the disease, usually, however, not before the second or third week. They may be present only for a few days, and then disappear, or they may be present during the entire course of the disease. Usually they disappear spontaneously during the first or second week of convalescence, though in rare cases they may remain longer. In the individual case it is not necessary that their presence should be demonstrated before beginning prophylactic measures; there would be very great risks in waiting for such a demonstration. The urine of every case of typhoid must be disinfected as soon as it is voided.

The second way in which typhoid bacilli leave the patient is in the feces. With newer and better methods of cultivating typhoid bacilli from the stools, it has been shown that in a majority of cases the bacilli do not appear in the stools before the beginning of the second week, and disappear with the fall of the fever.

That they may appear earlier and may persist into convalescence, even longer in rare cases, can not be doubted, yet these exceptions may be disregarded. There is also proof that typhoid bacilli in small numbers may occasionally occur in the stools of the doctors and nurses caring for typhoid-fever patients. However, this is probably a very rare occurrence, and, with greater care and cleanliness on the part of the attendants, this need not occur.

There have been a number of cases reported in which typhoid bacilli are said to have been present in the sputum. In a number of these cases the proof that they were typhoid bacilli is unsatisfactory. In the small number of cases where the evidence is convincing there was a pulmonary complication present, and the sputum in most cases was bloody, and the presence of the bacilli may have been in association with the blood.

Reports have also been made of the discovery of typhoid bacilli in the sweat and even in the expired air. In all such reports that I have been able to find the proof has been entirely unsatisfactory.

From the standpoint of prophylaxis, the question practically narrows down to disinfection of the urine, stools, sputum (in the few cases where such is present), and of all the objects which may accidentally be contaminated by these excretions.

DISINFECTION OF THE URINE.

The nurse or attendant should be taught to regard every specimen of urine as a pure culture of typhoid bacilli, and to exercise the greatest care in preventing the scattering of drops of urine over the patient, bedding or floor, or over the hands of the attendant. The question as to the best solution to use for disinfecting the urine has been carefully studied by Gwyn.[2] He found that for disinfection of the urine within one-half to one hour, a volume of urine would require:

3/10 to 4/10 its volume of 1-20 carbolic acid solution.
1/40 of its volume 1-1,000 Hg Cl_2 solution.
1/10 of its volume 10 per cent. formalin solution.
1/10 of its volume liquid chlorids.

For disinfection within one to two hours, a volume of urine would require an equal volume, to one-half its volume, of milk of lime solution. A volume of urine may be disinfected within five to fifteen minutes by one-fortieth its volume of chlorinated lime solution.

As to the relative value of these disinfectants, he concludes:

Milk of lime hardly deserves the name of a disinfectant. Carbolic acid is of use only in large amounts, and in strong solutions, if a speedy result is wished. Formalin is hardly serviceable on account of its cost, but is nevertheless an efficient disinfectant. Bichlorid of mercury, chlorinated lime and liquid chlorids are of real value, are rapid in their action, and are efficient in comparatively dilute solutions.

My own experience with chlorinated lime leads me to believe that it is neither the safest nor the best disinfectant to use for the urine. Although strong solutions of carbolic acid are required, they are efficient, not expensive, and, except for the poisonous properties, very suitable for this purpose. The solutions of bichlorid of mercury are also good, and I should advise these two substances in preference to the others. In making the Hg Cl_2 solution, it is well to add Na Cl in the proportion of 0.5 parts to 1,000.

The best plan is to have a covered jar containing 1½ liters of 1-20 carbolic acid solution, or 200 c.c. of 1-1000 Hg Cl_2 solution, preferably the latter. Into this jar the urine can be poured from the urinal as soon as it is voided, and the jar should be emptied every day, but not sooner than one to two hours after the last urine has been added. These amounts of fluid are sufficient to sterilize 3 liters of urine. If more is being voided the amount of disinfecting solution should be correspondingly increased. A second jar large enough to contain the urinal should also be filled with the disinfecting solution, and in this the urinal should be allowed to remain constantly, except when required for the patient's use.

A very important question is as to the length of time necessary to continue the sterilization of the urine during and following convalescence. As previously stated, in most cases the bacilli disappear from the urine during the first or second week of convalescence, but they may persist much longer, even for months, or in rare cases, for years. These cases, however, are usually associated with symptoms of inflammation of the urinary tract, and are so discovered, when extraordinary measures should be used to prevent the condition from continuing. So long as the symptoms are present sterilization of the urine should be persisted in. In hospitals, or wherever bacteriologic methods are available, no patients should be discharged until cultures from the urine show typhoid bacilli to be absent. Whenever such methods are not available, the patient should be urged to continue the sterilization of his urine into the third week of convalescence. Practically, it will hardly be possible to have this done longer.

By a number of writers the administration of urotropin as a prophylactic measure has been urged. The evidence now is pretty conclusive that urotropin does not kill the bacteria, which have gained entrance to the urinary tract, but only inhibits their growth. Therefore, according to Fuchs,[3] although when bacilluria is already present, urotropin apparently causes disappearance of the bacilli from the urine, they may reappear as soon as the urotropin is discontinued. On the other hand, if the urotropin is begun as early as possible in the course of the disease, it may prevent the occurrence of a bacilluria. The dose should be 2 gm. (30 gr.) daily, best given as gr. x, three times a day. However, several cases of hematuria following the administration of urotropin have been reported, in one case after giving the above dose for seven days. I know of no case, however, in which there has been any permanent damage to the kidneys.

Under no circumstances does the administration of urotropin permit the disinfection of the urine to be neglected. Such disinfection should be prolonged as far into convalescence as possible. When possible the urine should be shown to be free of bacilli before the patient is discharged. If urotropin is administered it should be begun early and continued throughout the course of the disease.

DISINFECTION OF THE STOOLS.

The determination of the best method to be employed for this purpose is much more difficult than in the case of the urine, since frequently the bacteria are imbedded in a hard firm mass of feces, which renders difficult the action of the disinfecting solution. The solutions most generally employed for this purpose are chlorid of lime, carbolic acid and milk of lime. Bichlorid of mercury is not a suitable medium. Good chlorid of lime is very

2. Johns Hopkins Hospital Reports, vol. viii.

3. Deutches Archiv f. klin. Med., vol. lxxvi.

suitable, but unfortunately it sometimes happens that the commercial product is not good. I have found one specimen purchased for this purpose to be absolutely worthless. One can not afford to take any risks in disinfection of the stools.

Both milk of lime and carbolic acid have been found to be efficient in case certain precautions are observed. I have tested these two solutions in the following way, imitating as nearly as possible, the natural conditions: A given weight of semisolid feces was sterilized, then thoroughly mixed with a given amount of typhoid bouillon culture and placed in the incubator for several hours, with the hope that the bacilli would penetrate somewhat into the fecal masses. The disinfecting solutions were then added and allowed to remain for a given length of time. The mixture was then diluted with a large amount of sterile water to get rid of the action of the disinfection solution and cultures made from the sediment obtained after standing a short time, or after centrifugalization. Carbolic acid was found to be very satisfactory, a given volume of feces being disinfected in one-half hour by an equal volume of 1-20 carbolic acid solution if the two are thoroughly mixed together.

It was found that by mixing a given amount of feces infected with typhoid bacilli with three times its volume of milk of lime, no bacteria could be demonstrated after one hour, even though the sediment were thoroughly washed with distilled water, and then the entire sediment added to a large amount of bouillon. The objection to the use of milk of lime is that too often it is not prepared in the right way. Air-slaked lime is worthless. To be of use the lime should have been freshly burnt and should be mixed with water in the proportion of 100 parts of lime to 60 of water. The lime should be allowed to soak up the water slowly. The dry hydrate which results may be kept for some time, but when exposed to the air also quickly takes up CO_2 and becomes worthless. To prepare the milk of lime, one mixes one part by weight of the fresh dry hydrate, prepared as advised above, with eight parts by weight of water. This mixture should be prepared fresh daily.

In using milk of lime to disinfect feces, it is necessary that they should be thoroughly stirred together, and if there are hard fecal masses the fluid should be allowed to act for a long time, even an entire day. As in the case of the urine, it is well to have a jar to hold the feces for the entire day. The milk of lime should be poured over the feces in the bedpan and the mixture thrown into the jar and covered by an excess of the milk of lime and all thoroughly stirred together with a stick or rod kept for the purpose. The bedpan should be kept filled with milk of lime when it is not in use.

Considerable attention has been given to the details of the disinfection of the stools and urine, because it is believed that at present, even where attempts are being made to carry out disinfection, absolutely no results are being obtained. One might as well make no attempt to disinfect the stools as to do as is often done, simply pour over them a little milk of lime, which has been prepared for weeks, and during this time has stood exposed to the air.

On account of the care necessary in preparing and keeping the milk of lime solution, disinfection with carbolic acid is in general to be advised. It is not an ideal disinfectant on account of its poisonous properties, but I believe at present it is the best available. It is cheap and quite efficient when used in strong solutions. To avoid any risks it is better to use stronger solutions than were found to be efficient experimentally. I should advise thoroughly mixing the stool with at least twice its volume of 1 to 20 carbolic acid solution and allowing it to stand for several hours, at least.

The ideal method for sterilization of the feces is by heat, and this method has been employed to some extent by the English army in South Africa. The stools were boiled in large cauldrons with a small amount of carbolic acid added, which entirely destroyed the odor. By this method the feces were rendered harmless almost instantly. The method is described by Major Cummings.[4] Such a method as this should be employed in fever hospitals and military camps, or wherever large numbers of typhoid-fever patients are collected. The method, however, could hardly be employed for individual cases. After a stool the patient's buttocks should be wiped with a solution of Hg Cl_2 1-1,000. The patient should be urged to carry out the disinfection of stools during entire convalescence.

DISINFECTION OF THE BATH WATER.

Undoubtedly the general employment of hydrotherapy in treating typhoid fever has added another important channel by which typhoid bacilli are disseminated, and yet practically no attention has been directed to this danger. The patients occasionally void in the bath, and there is always the danger of small fecal particles being washed from the anus into the bath water. This contaminated water is usually thrown into the common sewer. Where portable bath tubs are used it is not infrequently splashed over the floors. E. Babucke[5] has sought experimentally to find the best method for the disinfection of the bath water. He found chlorid of lime the best substance to use, and found that even where the water contains coarse fecal matter, 250 gm. (one-half pound) of chlorid of lime will render the ordinary bath of 200 liters sterile in one-half hour.

As previously stated the quality of chlorid of lime is unfortunately somewhat uncertain. However, at present I know of no satisfactory substitute for this purpose. It is well known that the disinfecting properties of chlorid of lime depend on the active chlorin it contains, and this is rapidly lost on exposure to the air. It is of importance that it should be purchased in small tightly closed packages; the cans with sliding tops are not sufficiently tight. When a can is once opened its contents should be used quickly, better within one to two days. If this substance is purchased in such tight one-half pound packages, thus containing enough for only two to four baths, it will be found a very suitable and effective medium. Fortunately the tubs are not injured by it.

OTHER PROCEDURES IN DISINFECTION.

If there be any expectoration, the sputum should receive the same care as in tuberculosis. It is best to collect it in small cloths, which may be burned.

All the linen leaving the patient's bed or person should be soaked for two hours in 1-20 carbolic acid solution, and then sent to the laundry, where they should be boiled. All dishes should be boiled before leaving the patient's room.

The nurse should wear a rubber apron when giving tubs or working over a typhoid patient, and this should be washed frequently with a carbolic acid or bichlorid

4. British Med. Jour., 1901, vol. i, p. 954, and 1902, vol. ii, p. 1368.

5. Centralblatt f. Bakteriologie u. Infectionskrankheiten, 1900, vol. xxvii, p. 860.

of mercury solution. The nurse should wear rubber gloves when giving tubs, or else soak her hands thoroughly in 1-1,000 bichlorid solution after she has finished.

It is impossible here to deal with all the possible modes of spread of the infection. Keeping in mind that everything leaving the patient should be sterilized whenever there is a chance of its having been contaminated by the discharges, any physician, assisted by a nurse of ordinary intelligence, even one of the family, can carry out very satisfactory prophylaxis.

ISOLATION OF PATIENT.

The question as to the necessity for the isolation of typhoid fever patients is a difficult one. To prevent direct infection of the other members of the family a moderate degree of isolation should be carried out, though this need not be absolute as is necessary in the exanthemata. The windows should have fly screens in summer. After recovery the room should be disinfected. There can be no doubt as to the advantage, not only to the patient, but to the public at large, of the treatment of typhoid-fever patients in hospitals. This is especially true where the patient's circumstances will not permit satisfactory prophylaxis to be carried out at home. Usually in the cities such patients can now be prevailed on to enter hospitals, but in rural districts this is impossible. Here the health boards should be appealed to for means to carry out satisfactory isolation and prophylaxis. The country health boards must learn to recognize that this is as important as isolation in smallpox, though not nearly so difficult to perform.

An important question is as to the necessity for the isolation of typhoid patients in special wards in hospitals. At present this is not generally done in this country. It is more frequently done in Germany, yet so eminent an authority as Professor Curschmann thinks that it is unnecessary in carefully conducted hospitals. Every one, however, who has had experience in general hospitals, knows that cases of hospital infection are not uncommon. Many such cases are reported in the literature, yet for obvious reasons, very few statistics in regard to this point are available. When, however, in a hospital with as good sanitary arrangements as the Johns Hopkins possesses, and in which all possible precautions are taken to prevent the infection spreading from patient to patient, 1.81 per cent. of all the cases of typhoid fever have been of hospital origin, the advisability of isolation of typhoid-fever patients is certainly worth considering. As in this climate, most of the cases occur during the summer and fall months, when artificial heat is not necessary, there could be cheap temporary wards erected, or even tents, which could be taken down during the winter months, and the few typhoid-fever patients then admitted could be treated in the smaller rooms of the permanent hospital. The danger to the nurses and doctors would also be much less, as having exclusive care of typhoid-fever patients, the personal disinfection and prophylactic measures could be carried out much more effectively.

AUTOPSIES ON TYPHOID-FEVER PATIENTS.

It would seem unnecessary and somewhat presumptuous to call the attention of pathologists to the part they play in the spread of the typhoid infection. Yet in hardly a pathologic laboratory are any precautions observed. The autopsies are performed in the ordinary manner; the organs, even the intestines, are washed in running water, which is allowed to pass into the sewer unsterilized. Students are permitted to handle the infected material without subsequent sterilization of the hands.

From what precedes, it is evident that this is not as it should be. The remedy is self-evident, the details of which are comparatively simple.

The object of this paper is not so much to formulate a complete set of rules for the guidance of physicians in carrying out the methods of prophylaxis as to urge on them the necessity of these measures, the details of which are comparatively simple when the principle is thoroughly recognized. This method of stamping out typhoid fever is not based alone on theoretical grounds, but there is ample actual proof for the statement previously made that in this way typhoid fever may be eradicated from this country. An interesting graphic chart in the report of the secretary of the state board of health of Michigan for the year ending June 30, 1901, shows the effect of isolation and disinfection in a state where it is impossible at present to carry these measures out completely. Where isolation and disinfection were neglected, there occurred on an average 6.72 cases in each outbreak, with an average mortality of one. Where isolation and disinfection were observed, there averaged only 2.22 cases in each outbreak, with an average mortality of 0.39. But where these measures have been carried out completely, even the entire suppression of typhoid fever in a given district has been attained. During the past year, Professor Koch, who is the leader of the movement now being vigorously carried on to stamp out typhoid fever in Germany by means of isolation and disinfection, gave a most brilliant demonstration of the success which may attend such efforts. With a corps of assistants he fitted up a laboratory in Trier, a locality where typhoid had got a firm hold. By bacteriologic methods, he was able to demonstrate 72 persons to be suffering from typhoid infection. As soon as the nature of a case was established, isolation and vigorous disinfection was practiced. The result was that within three months no more typhoid bacilli were discoverable, the patients were cured, no fresh cases arose, and so far as that group of villages was concerned, typhoid was exterminated. Since, in other groups of villages situated under strictly comparable conditions, but where these methods of dealing with the disease were not practiced, typhoid continues to be prevalent, it may reasonably be inferred that the disappearance at Trier was not spontaneous, but due to the methods of identification and disinfection which were used.[5]

In Germany, where public measures may be much more under the direct control of the government than here, the problem is undoubtedly a simpler one than with us. Possibly here the ultimate end must be a similar control by the government, but this will come slowly, and in the meantime the physicians should make a determined stand, and the result may be reached before the slow-working processes of law can be put in motion.

In brief, let us make every effort to make an early, positive diagnosis. If unable to do this, we should not wait for a positive diagnosis, but when we suspect typhoid put measures for prophylaxis in operation at once. Let us not neglect our case because others are being neglected, recognizing that each case is an added danger. Let every physician remove as much of the danger as he can, then there will be fewer cases for the others to neglect.

5. British Med. Jour., 1903, February 28.

THE ABUSE OF DRUGS.*

JOHN V. SHOEMAKER, M.D. LL.D.

Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine in the Medico-Chirurgical College.

PHILADELPHIA.

All drugs which are potent for good contain the possibilities of evil. This statement applies with equal truth to most, if not all, of those natural agencies which we employ—not as generally as we should, perhaps—in our struggle with disease. A superabundance of food, indigestible or illy prepared viands, create digestive disorders which are liable to eventuate in chronic and incurable lesions. Excessive exercise in the form of athletics may lay the foundation of organic heart disease. We must study minutely the proper methods of applying electricity if we would derive the benefits inherent in that powerful agent. In the same manner might be pointed out the reverse side of the influence of every drug or agency employed in medicine.

Nothing is more distinctive of modern methods of teaching therapeutics than the preliminary attention given to the physiologic action of drugs. We seek to understand the action of medicaments on normal organisms with a view to deducing and explaining their action in disease. Let us not, as physicians, forget for an instant, therefore, to recognize their untoward effects. Theoretically, indeed, we will usually acknowledge the defects of our instruments of warfare but in the exactions of daily practice we are apt to lose sight of the fact. Medicinal substances are often used too freely, too long, or in too strong doses in cases which could be more speedily, decidedly, and permanently relieved by the natural agencies which we possess but of which we make too little use. It is natural and easy to fall into a routine of drug-prescribing, but it is our duty, as reasoning and scientific physicians, to strive against this tendency. We must study when to withhold, as well as when to give, drugs.

People at large—our patients—very generally expect more of drugs than is within the power of those substances. They look for specific effects. To their conceptions the name of a disease should suggest a remedy. They are necessarily ignorant of the fact that effects differ according to the dose given and the condition of the patient's tissues, organs and secretions. The aim of the therapeutist should be to handle his remedial agents, of all kinds and as far as possible, as instruments of precision. This object he will best achieve by studying not the name of the disease but the disease itself, in all its varying phases, not forgetting the personality of the patient. In the management of the sick let us attend, with at least equal care, to the nursing, the diet, ventilation, hygienic surroundings, exercise, where that is possible, passive exercise, where that is suitable, the therapeutic properties of water, massage, and electricity. These agencies, intelligently managed, can often accomplish more lasting good than drugs. I believe that we, as physicians, should rely more on natural agencies and less on medicinal substances than, perhaps, we have been in the habit of doing in order that we should not ourselves encourage an abuse of drugs and that we should be able to set a consistent example to the public on this subject.

For, as we all admit when our attention is directed to the matter, there is, on the part of the general public, a widespread habit of drug-taking, which is always injurious in the end, and often ruinous. Large numbers of people exhibit a strange fondness for taking medicine on their own responsibility. Many have favorite remedies, to which they have recourse when troubled by certain symptoms. In some instances a belief in these substances has been inherited. Some traditional knowledge of the properties of herbs is acquired by country people who, moreover, are not infrequently obliged to depend to a certain extent on their own resources, especially in the more sparsely settled districts. In the cities a great fountain head of the habit of self-prescribing is the advertising quack with his space in the daily sheets, his testimonials and his "little book." Again, the practice is well nigh universal of offering advice to friends. The man or woman who knows "what is good for" any symptom or collection of symptoms is always with us, like the poor. Thus a mass of imperfect information or false knowledge regarding the treatment of disease is always in circulation. It passes from mouth to mouth.

Another prolific source of indiscriminate drug-taking is the prescribing druggist. I am sorry to say that this class includes many druggists throughout the land. In addition to the patent medicines which they carry in stock they seldom, if ever, hesitate to prescribe for any customer who comes to them complaining of any symptoms. I have the utmost respect for the scientific pharmacist and pharmaceutic chemistry. Pharmacists have aided the progress of medicine in various ways. They have isolated active principles; they have suggested improved preparations; they have, to a large extent, replaced the crude and nauseous doses of our forefathers by articles, fluid or solid, which are equally effective and far more palatable. They are not instructed, however, in diagnosis, prognosis or therapeutics. Therefore, they appear to have no adequate conception of the fact that the most trivial symptoms may spring from some insidious and serious disease.

I was once, many years ago, called in haste to see a woman who had been seized with uremic convulsions. A large quantity of albumin was present in the urine. The convulsions were succeeded by coma and the woman died. She was *in extremis* when I first saw her, and the condition offered little prospect of successful treatment. The woman was in humble circumstances, and, like many of her class, had borne up as long as possible and had not complained much of her distress. She had, however, been lately troubled by a cough which she, of course, attributed to a "cold" and had sent to a neighboring druggist. Without seeing the sick woman, knowing nothing of the nature of her ailment, hearing of a cough, he sent a cough mixture. If this woman had in time been placed on proper treatment there is no question but that her life would have been prolonged.

The druggists generally reason that the preparations they send in response to such calls are harmless, at least, but this is not the sole, or chief, point. There are many cases where a preparation, harmless in itself, satisfies the patient for awhile and causes a delay in obtaining competent advice, which may entail injurious or even fatal consequences. Pharmacists should not assume responsibilities for which their education has not fitted them and which may place them in a very uncomfortable position.

Furthermore, nearly every pharmacist has a class of preparations of "his own make". These are always ready at hand to sell to whomsoever will buy. Ready-made preparations of every kind are offered for the chief ail-

* Lecture delivered before the Hartford Medical Society.

ments of humanity. Indigestion, kidney disease, rheumatism, insomnia, headache and catarrh are among the affections which are most exploited.

One of the most common forms of drug abuse is the constant reliance on purgatives. The saline cathartics are so well known and so easily procured that every man considers himself capable of prescribing for his constipation. The waters of various saline springs are bottled and put on the market for public sale. Many people form a habit of relying on these salts instead of regulating their habits as regards exercise and diet and overcoming the sluggish condition of the bowel by natural means. The dependence upon cathartics adds to the difficulty it was intended to overcome. The muscular fibers of the intestine become weakened and relaxed. Disease of the mucus membrane may be established or aggravated as a result of the continual irritation. It must be remembered also that the alkaline bases are capable of exerting a depressing influence on the action and force of the heart. Their continued use is productive of anemia.

Another very popular and much abused class of preparations comprises those sold under the generic titles of bitters or stomachics. These are, to all intents and purposes, alcoholic drinks. Different preparations exhibit different degrees of strength, but many are equal to strong wines or whiskey. The whiskey which they contain is flavored with some aromatics or tonics and they are recommended as sovereign remedies for indigestion. The man—or woman—who announces himself as a total abstainer thinks that he is justified in using these bitters in order to stimulate appetite and digestive power. The mixtures are purposely made palatable. The presence of some vegetable matter does not detract from the flavor of the alcoholic beverage entering into their composition. It follows that their effect is principally that of alcohol itself, a primary stimulation succeeded by depression, a false sense of improvement followed by aggravation, a necessity of increasing the frequency and the amount of the dose. The advocate of temperance may become as devoted to his bitters as the ordinary drinker to his whiskey. Indeed, the mixtures of which I speak very often inspire a taste for drink which can only be satisfied in the usual way across the bar. I have no doubt that in very many instances the alcohol habit has grown out directly from the constant tippling of so-called bitters. An analogous custom is that of drinking preparations containing ginger. Either because the ordinary alcoholic beverages are not procurable or because a taste has been acquired for the fiery quality of the ginger, there are those who take their tipple in this form. In addition to the ill effects which a constant recourse to so strong an irritant as ginger must produce upon the mucous membrane it exposes its consumers to the danger of losing their sight; several cases of the kind have been reported originating in this habit.

The malt preparations are likewise often abused. This line of products is manufactured very extensively and largely used. They contain a percentage of alcohol which renders them a species of beer and some of them are, in fact, considerably stronger than the beers ordinarily sold in the usual way of the liquor trade. Some of the breweries now make malt preparations "for the use of the medical profession." They are recommended for their nutritious and gently stimulant properties, are extensively sold and their effect is almost, if not quite, identical with that of beer. Those persons who habitually, and on their own responsibility, consume preparations of malt might just as well go frankly to the beer saloon and drink in public. It is generally believed that of the two evils drinking in companionship is less injurious than "secret drinking," as it has been termed.

Two great evils of life are pain and sleeplessness. Headache is one of the commonest forms of pain, and for its relief there has grown up of late years, and especially since the coal tar products have been introduced, a class of preparations known popularly as headache powders or tablets. To a man almost, if not quite, the pharmacist puts up his own headache cure. In addition to these products there are many advertised in the street cars and sold by druggists and department stores. They are advertised as "instantaneous relief," "cures while you take," and other similar phrases. Not infrequently samples are thrown in at the door. These powders are principally composed of coal tar products, and the power which they possess of alleviating headache and other forms of pain makes them exceedingly dangerous unless prescribed in proper doses and used under the supervision of a physician. These agents are capable of depressing both the sensory and the motor nerve tracts. Excessive doses, or ordinary doses in susceptible individuals, may have a weakening action upon the heart, reduce the temperature of the body and injuriously affect the composition of the blood. I am personally cognizant of a number of cases in which very serious symptoms resulted from taking headache powders.

These evil consequences are particularly rife among anemic and neurotic persons, especially women. One such individual of whom I have knowledge had bought headache powders and taken them for the relief of distressing headache until, upon one occasion, she was seriously attacked. The pain in the head was assuaged, indeed, but in its stead she was prostrated to the verge of syncope, was nauseated, sweated profusely, her face became cyanotic, the action of the heart and pulse exceedingly feeble. That young woman had a lesson which will perhaps last her the remainder of her life. These are some of the typical manifestations which are produced by the class of substances which enter into the composition of these headache powders or tablets. Other signs of toxic influence which may occur are: Salivation, discharge from the nose and eyes, vertigo and depression of the temperature to a subnormal degree. Convulsions and vomiting of blood have also been witnessed.

Furthermore, the people who acquire the habit of lulling pain with headache powders are exposed to danger in another direction. They may limit themselves at first to a single powder, but the invariable tendency is to increase the dose and shorten the intervals. This was, in fact, the case with the young woman of whom I have made casual mention. She imagined she could take augmented doses with impunity. We observe the same feature appearing in reports which are given of intoxication by coal tar derivatives. Of a man we read that "he took a dram and a half within four hours." A woman "took one dram in two portions within a short time of each other."

Many such instances can be collected from the literature. A great many cases, no doubt, occur which never find their way into print. From time to time fatalities from this cause have been reported in medical journals and in the daily newspapers. We have all read of such instances.

Dr. J. Ashburton Cutter[1] published an account of a case of poisoning from migraine tablets, which was made the basis of a suit for damages. On the recommendation of a drug clerk a healthy young man had taken two tablets of "Quick Headache Cure" and two hours later a third. Very soon after the third dose the man became unconscious, perspired profusely, the heart was feeble and irregular, respirations shallow, lips blue, and the face presented a death-like aspect. The patient was revived from the attack but his nervous system suffered a shock from which, eighteen months later, it had not recovered. It was shown by analysis that each tablet contained 3 grains of acetanilid, 2 grains of monobromated camphor and 1 grain of citrated caffein. As acetanilid is slowly soluble it was supposed that the patient received the effect of the entire 9 grains, dissolved at about the same time by some hot coffee which he drank.

The United States Dispensatory notes one case of death from 5 grains of acetanilid. A powder of similar composition, in which salicylic acid was substituted for the acetanilid was once naively described to me by its maker, who appeared to have no idea that salicylic acid was capable of producing any ill consequences. Similar objections are to be made to the "rheumatism cures" which are so abundant in the stores. Many of these contain sodium salicylate, others potassium iodid. Neither of these substances can be taken indiscriminately or for a considerable period without mischief. Salicylic acid may depress the heart and injure the nervous system. It is much more effective in acute than in chronic rheumatism and is an agent which should never be taken upon the advice of irresponsible persons. The phenomena of iodism are familiar to us all and are not infrequently excited by comparatively few doses. The continual use of alkalies weakens the heart and impoverishes the blood.

All the analgesic remedies, anodynes and hypnotics, are susceptible of abuse, and it is by this class that the worst human wrecks—physical, mental and moral—are produced. Opium and cocain are the favorite drugs of habitués in this country. Chloral is abused by not a few individuals. Cannabis indica has its victims but is less extensively used in this country than in the East.

Opium, one of our oldest and best remedies, when used with circumspection, is also the one which from ancient times has been extensively used, or rather misused, by large numbers and for the purpose of producing pleasurable intoxication. The train of symptoms which the habitual consumption of opium or morphin induces, the gradual enslavement of the will and deterioration of morals which it causes, are so well known that I need not rehearse them, especially in this place and this company. Opium addiction has been studied from every point of view. Like other great problems which the medical profession must face the habit has an important sociologic side. The unrestricted sale and use of cough mixtures containing preparations of opium is to be deprecated, as it may lead to the formation of a habit. All kinds of cough mixtures are indirectly injurious when taken without medical advice. Nauseating syrups disturb and lessen the digestive capacity. It is pitiful to think how much harm they may accomplish when taken without advice or supervision in the first stage of pulmonary tuberculosis.

The great source of opium addiction, however, must be an experience of its effects in relieving pain. In addition to this cause, in our large cities, and especially where Chinese congregate, many acquire the habit from going out of curiosity to some den and smoking the opium pipe. There is a certain class of young people who are weak enough to look on such experiences as an evidence of their knowledge of the world. These are precisely the individuals who fall victims. They go to opium dens exactly as they first go to the liquor saloons.

Cocain is a recent addition to our list of intoxicants. Already, however, it has established a wide sway. As with morphin, the hypodermic syringe has provided a way of acquiring speedily the effects of the drug. It is not exactly germane to my subject, but I would simply note that in my judgment the hypodermic injection for the relief of pain may be abused and may suggest to the patient the capabilities of intoxication by morphin or cocain. The effects of cocainism are deplorable. The people who are enslaved by these unfortunate habits are for the most part neurotic and in a certain proportion they inherit a predisposition to insanity or the readiness with which they fall a prey to a pernicious habit is in itself a precursor of mental alienation. A peculiar complication of some of the cases of cocainism is that its victims had formerly been addicted to opium, and, indeed, may combine the use of the two narcotics. Nay, alcoholism also may be included in the lamentable pathologic combination.

Sleeplessness is truly a great ill. In addition to the deprivation of natural rest, which is a debilitating factor, it is a source of actual distress. The active mind creates a sort of torture for the sleepless. It is no wonder, therefore, that the victim of insomnia should prize the power of chloral. It is characteristic of these patients that they have a species of superstitious dread that they cannot sleep, and this feeling in itself increases the difficulty. Consequently, one who has derived a refreshing slumber from a dose of chloral is very likely to take another dose the next night, and in this manner lay the foundation of a habit which will cause more injury than the insomnia. If 10 grains lose their effect the quantity will be raised to 15, and if one dose will not cause sleep it will be repeated. Chloral is not a substance which can thus be used with impunity. It weakens the functional activity of the brain and spinal cord, it enfeebles the heart both by an influence upon its muscular tissue and the cardiac ganglia, reduces arterial pressure and has a deleterious effect upon the composition of the blood. The constant use of chloral engenders muscular debility, may occasion epileptiform convulsions, and even a condition akin to that of delirium tremens. Sudden death may take place from failure of the respiration or circulation.

The abuse of drugs may legitimately include a consideration of alcoholism. This is another of those broad themes which is of interest and importance from many other points of view than the medical. The name of Dr. T. D. Crothers is identified with the scientific study of chronic inebriety. The excessive use of alcoholic liquors is not regarded with the social tolerance, or even approbation, that it was in the days of our ancestors. Still we have among us innumerable men who esteem it an admirable joke to entice their fellows to gross drunkenness. Social drinking habits are all too prevalent. We, as physicians, are often brought in contact with all phases of alcoholic intoxication. The physical and mental outcome of drink are particularly evident

1. Medical Bulletin, March, 1903.

in such an institution as Walnut Lodge Hospital. We all meet constantly with the grave structural mischief which chronic alcoholism has wrought. Perhaps each of us has numbered among his acquaintance or clientele some of those unfortunate individuals who are victims of imperative impulse, known popularly as periodical spreers. According to my observation, most such persons have been of decided and resolute character. During their intervals of sobriety they are usually men of influence and industry.

The advocates of total abstinence, and especially of prohibition, have often injured their cause by the extravagant claims and assertions which they have advanced. Scientific temperance, if I may use such an expression, is now the most promising factor in the suppression of alcoholism. In Europe, where drinking habits have been far more universal than in the United States, the medical profession has been forward in instructing the populace as regards the destructive influence of alcohol. France, formerly regarded as a temperate country, seems to have become demoralized and has taken to strong spirituous beverages instead of light wines and *eau sucrée* (sugared water). Germany is awakening to the doubt whether unlimited beer is an unlimited blessing.

There is one duty which members of the medical profession should realize, not only as regards alcohol but also respecting those drugs which are capable of forming habits, such as opium, chloral, cocain and others which I have enumerated. We should be wary in our recommendations and prescriptions. We should discountenance counter-prescribing and self-prescribing. It is my custom in ordering alcohol to indicate the exact liquor, dose and time of taking the article. In this manner it is my intention to preclude, as far as possible, the danger of abuse. When I prescribe alcohol it is as a medicine and not as a beverage. I deprecate the loose way in which I have been told that some physicians permit themselves to recommend drink. One man related as an instance of this practice that, consulting a physician for a "cold", he was advised to go out and "get a load on", and, he added, "it brought me around all right". I have been told of others who advise patients to take, for instance, six or eight glasses of whiskey. The amount of a drink of whiskey is a very variable quantity. We cannot realize our responsibilities too keenly in these matters.

It is not within our power to prevent individuals from dosing themselves with all kinds of drugs and nostrums, but we can, at least, in prescribing for the sick, endeavor to have a reason, based upon its physiologic action, for every article which we employ. We can watch the effects of our remedies and discontinue them when signs of danger or abuse are exhibited. We can be careful in ordering narcotics and especially in injecting them beneath the skin. In my own practice I rely much on hygiene, diet, massage and electricity. With the aid of such powerful agencies we can minimize our use of drugs.

I would not be understood as uttering a word against the intelligent use of drugs, based on a knowledge of their physiologic action and their indications in given cases. We must remember, however, that temperance is a word not restricted to the subject of alcoholic drinks. We should be temperate in eating as well, and it behooves physicians to be discreet in the employment of drugs.

PROSTATECTOMY.

REPORT OF 51 CASES OPERATED ON FROM MAY 6, 1901, TO FEBRUARY 26, 1904.

JOHN B. MURPHY, A.M., M.D.

CHICAGO.

The surgery of the prostate is rapidly approaching that of the appendix and gall bladder in its significance to the surgeon and patient. Until very recently the prostate was not treated in the masterful and efficient manner in which other organs, as the uterus, tubes and stomach were handled surgically.

In considering this subject to-day I trust I will be permitted to omit the details of anatomic relations and physiologic functions of the prostate, described in full in my recent article on the subject. I will, however, go more into the details of the clinical aspects of the

Fig. 1.—Shows relation of the prostate to the deep perineal fascia, the bladder, the seminal vesicles and ureters. (Photographed from dissection by Prof. W. T. Eckley.)

cases. The etiologic factors, the pathologic conditions of the bladder and kidneys at the time of the operation, and the patient's general condition will be more carefully treated.

Experience has produced a number of changes in the technic of the operation and as time advances we are able to procure more speedy and complete recoveries than in our earlier cases. It is very gratifying to be able to report 51 consecutive cases of prostatectomy with but a single death due directly to the operation. In this one case the operation of prostatectomy would not have been undertaken had it not been for the urgent symptoms produced by the large stone in the bladder. The ultimate results have been far more gratifying than I expected, as will be shown by a perusal of the individual histories with the later reports of the patients.

Since I called attention to the enlargement of the

lumen of the prostatic urethra that sometimes occurs with hypertrophy of the gland and advised the removal of a portion of the floor with a median suture of the lateral walls to form a new floor, the recoveries have been more rapid, and there has been no case of extravesical accumulation of urine during micturition with subsequent dribbling. The extra vesical pouch, or dilated prostatic urethra, can be readily recognized by the surgeon who carefully examines the prostatic urethra at the completion of the operation. It can also be demonstrated on the cadaver when prostatic hypertrophy is present. If this pouch is not recognized by the operator and properly treated, the operation of perineal prostatectomy will occasionally fail to produce that primary and complete relief which we desire to secure for the patient.

It appears to me that suprapubic prostatectomy will in the future be reserved for the exceptional cases of enormous hypertrophy of the gland, or the cases of pedunculated middle lobe with stone, notwithstanding the brilliant results attained by my friends, Mr. Freyer of London and Mr. Moynihan of Leeds and by myself. That the Bottini operation will entirely disappear as a

Fig. 2.—Photographed from dissection by Prof. W. T. Eckley. Shows relation of prostate to deep perineal fascia, bladder and seminal vesicles, lateral view.

method of treatment seems to me certain, for it is unscientific, inaccurate and hazardous in its technic and unreliable in its permanent results. It must, therefore, vanish as intrauterine electrolysis did.

ANATOMY.

The prostate may be regarded as situated in front of the bladder, entirely behind the triangular ligament or deep perineal fascia (Figs. 1 and 2), immediately anterior to and in close contact with the rectum and completely surrounding the prostatic urethra. It is tunneled by the prostatic urethra, which occupies the second anterior fifth of the gland, from before backward. Three-fifths of the normal prostate is behind the posterior level of the urethra (Figs. 3 and 4). Its firmest fixation is by its attachment to the posterior layer of the triangular ligament. When the ligament is divided, therefore, and the prostate liberated, it permits of considerable latitude of motion. On the anterior surface it is rather loosely attached to the urethra; on the posterior it is firmly fixed to it. The mucous lining of its glands and of the ejaculatory ducts and prostatic sinuses are continuations of the mucosa of the urethra (Fig. 3), so it is not possible to remove the entire prostate without removing the prostatic portion of the urethra behind at the veru montanum. It is possible to remove the lateral and posterior lobes of an hypertrophied prostate, allowing the isthmus to remain, and retain the anterior portion of the urethra and three-fourths of its circumference. The anterior wall of the urethra is crescent shaped, its convexity forward. The posterior surface of the urethra vaults forward into this crescent, the elevation being made up of the colliculus, utriculus, ductus ejaculatorii and the connective tissue surrounding them (Fig. 5), and the middle lobe, so-called, behind, as shown in Fig. 6. The middle lobe,

Fig. 3.—This and Figure 4 show the relation of the prostate to the prostatic and membranous urethra, as well as the relations to the bladder wall and seminal vesicles. (Toldt.)

in the normal anatomic condition, is a small, bullet-shaped, tongue-like projection from the base of the prostate, posterior to the urethra. It is not a lobe, as compared with the lateral lobes, but is merely a projection in the direction of the bladder from the posterior commissure, between the lateral lobes. When the lateral lobes and posterior commissure are removed, therefore, it is practically detached except from the mucosa.

The gland is surrounded by a distinct capsule (Fig. 5), which is smooth over the lateral lobes but is depressed into the gland and divided into layers around the vessels in the median line. This vascular area running parallel to the urethra and directly in the central line has been preserved, during a prostatectomy, as in Young's operation. Capsular divisions, therefore, in the removal of the gland should be made over the lateral lobes and parallel with the urethra, that this vascular area may not be invaded until the lateral lobes are decapsu-

lated and prepared for extirpation. Hemorrhage is thus avoided. The seminal vesicles recede from the prostate along the posterior wall of the bladder, and are closely attached to it. The vesicorectal fold of peritoneum is a long distance from the prostate and in subcapsular enucleation its integrity is not in danger of being disturbed.

The arterial supply of the prostate is from the inferior vesical and middle hemorrhoidal arteries. These subdivide at the inner surface of the capsule into small arterioles, and when the true capsule is peeled off they give rise to but little hemorrhage. The veins which form a plexus in the capsule empty into the vesicoprostatic plexus. In fleshy, phlegmatic patients there is a large plexus of veins in front and a little to the side of the median line. This bleeds profusely unless care is exercised to divide the capsule near to the middle line and displace it laterally without laceration. The lymphatic supply is meager and in the capsule practically nil, so there is no danger of absorption if one keeps within this space. The vessels accompany the venous plexus and finally end in the internal iliac nodes.

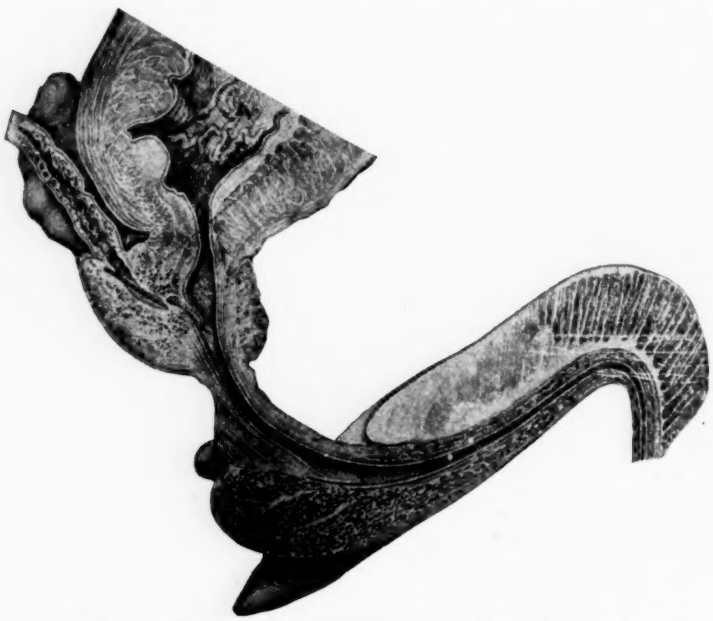

Fig. 4.—Shows the relation of the urethral mucosa to the ejaculatory ducts and prostatic sinuses, and the relation of the prostatic substance to the urethra. (Toldt.)

The nerves of the prostate are branches of the hypogastric plexus.

The glands are of the branched or tubular variety. They secrete a milky fluid which appears to play an important part in the motility of the spermatozoa, as without the addition of this fluid, in some of the lower animals, fecundation can not take place.

While in its normal anatomic position the prostate is located in front of the bladder and surrounds the urethra; in its hypertrophied condition it has an entirely different relation to the bladder. It normally extends backward onto the bladder only as far as the sphincter vesicæ internus (see Fig. 7, which shows the bladder wall with prostate removed). In its pathologic or hypertrophied condition it encapsules the neck of the bladder in a cuff-like manner, extending several inches upward on its wall, and often protrudes into the vesical cavity, carrying on its surface the mucosa vesicæ. This intravesical protrusion may be so complete as to form large sessile (or even pedunculated) masses springing from both sides and behind. They can be readily enucleated through the suprapubic incision. Occasionally a pedunculated lobe may be extruded through the muscularis and only retain the mucous covering. This, however, rarely occurs except from the posterior lobe. In its normal anatomic condition the muscular fibers of the prostate are continuous with the muscular fibers of the apex of the bladder wall, but as the prostate enlarges it extends upward as a cone-shaped body around the neck of the bladder, or bulges through its wall, and its muscular fibers in the upper part appear to be distinctly separated from those of the bladder. This anatomic relation gives distinct assistance and guidance as to the best method of removal or separation of the prostate from the bladder wall. At the extreme apex of the bladder it would be difficult to distinguish between the prostatic and vesical muscular fibers, but if the base of the prostate be first exposed the gland can be shelled from the bladder from above downward with comparative ease and safety to the integrity of the vesical wall. In other words, if we look upon the prostate as a cuff closely attached at its apex to the bladder and loosely attached at its base, we can see how its lateral lobes can be scrolled or rolled forward, with the assistance of hook

Fig. 5.—Shows the horseshoe shape of the prostatic urethra, also the elevation of the floor of the urethra into the crescentic anterior wall, which covers four-fifths of the entire circumference of the urethra. The fibers of the prostate extend into the verumontanum.

retractors, until the apex attachment is reached. This may then be divided with scissors and the size of the prostatic urethra determined.

Not only is the sexual function diminished or lost by the removal of the prostate, but it is materially interfered with by prostatotomy, as in the Bottini operation. Guiteras says: "The patients are not always incapacitated for sexual life by the Bottini operation." From our observations it would appear that the prostate gland is placed over the neck of the bladder as a secondary muscular development, for its greatest bulk is made up of muscular tissue, and the glandular element is small in amount. The urinary control is entirely independent of the prostate, as was clearly demonstrated in my original article[1] and additionally supported by my subsequent experience. It is rather an accessory to the sexual function than to the urinary apparatus. Dr. G. Frank Lydston has criticised my statements on this subject.

1. THE JOURNAL A. M. A., March 22-29, 1902.

He believes that prostatectomy does not produce sexual incompetence and that the patients who complain of it after the operation were probably impotent before, as most of them are old men whose sexual powers are in abeyance. From my experience, as shown in the late reports of the following cases, I cannot agree with him, although the power of erection is not completely lost in all of the cases.

ETIOLOGY.

The age at which prostatic enlargement begins is variously estimated. L. Bolton Bangs believes that it begins a considerable time before the fiftieth year, and that the earliest manifestations are not generally recognized.

Prostatic hypertrophy is extremely rare in Japan, India and China, while in Turkey it is of comparatively frequent occurrence. Schultze states that enlargement of the prostate is rarely found in the negro, although he describes one in which the middle lobe, obtained by autopsy, measured 5x7 cm., and microscopic examination showed a marked hyperplasia.

We do not believe that excessive sexual indulgence plays any more part in enlargement of the prostate than in the production of fibroma of the uterus, and it is well known that, proportionately, fibromata of the uterus are more common in the unmarried than in the

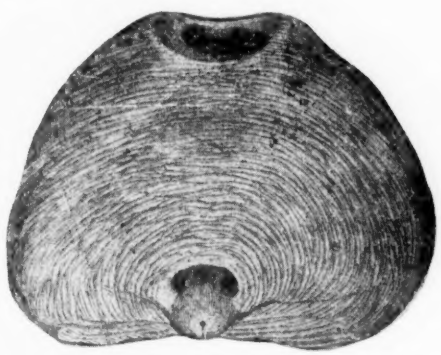

Fig. 6.—Shows the teat-like projection of the middle lobe into the floor of the urethra.

married. Then again it is rare in such races and nationalities as the Japanese, Chinese, Negroes and Indians.

Our exact knowledge of the etiology of enlargement of the prostate may be summed up by saying: "We know nothing definite about it."

PATHOLOGY.

Benign neoplasms and enlargements of the prostate resemble very closely, in their histology, mode of development and their relation to the organ itself, the non-malignant neoplasms of the uterus. First, there are myomata, fibromata and combinations of these two—principally the combinations—and, second, not infrequently general hypertrophy of the entire gland without any distinct tumor formation, resembling closely the soft, flabby subinvoluted uterus. The enlargements are many times completely encapsulated, but in the great majority of cases they are closely connected with the prostatic tissue itself, as in the intramural fibroid there is always an enlargement and hypertrophy of the uterine tissue associated with it. In the lateral lobes the tumors are usually intramural, less frequently submucous. In the middle lobe they are often pedunculated, rarely intramural and practically never subcapsular. The degree of general hyperplasia is out of all proportion to the size of the small fibromyoma, which is encapsulated in the lobe. We believe, therefore, that the operator who is satisfied with an enucleation of these small tumors will not have good results ultimately, though primarily they may be gratifying.

Wishard draws particular attention to the mechanical part of the obstruction in hypertrophy of the prostate, and to the direction which the enlarged body takes, viz., toward the bladder, the urethra or the rectum, as the case may be. The size in one direction bears no particular relation to the size in the opposite direction. It interferes more or less with the urinary function depending on the direction of the pressure, whether it be on the bladder, urethra or rectum and the angle produced in the urethral canal. The small, teat-like middle lobe makes a trap door to the internal urethral orifice over the commissure formed between the enlarged lateral lobes, and is an important factor in the obstruction.

TREATMENT.

The medical treatment consists principally of the alleviation of symptoms of obstruction and their sequences, rather than any effort to reduce the size of the prostate. Rest, rectal enemata and suppositories, with hot fomentations, sitz baths, etc., gives the most relief.

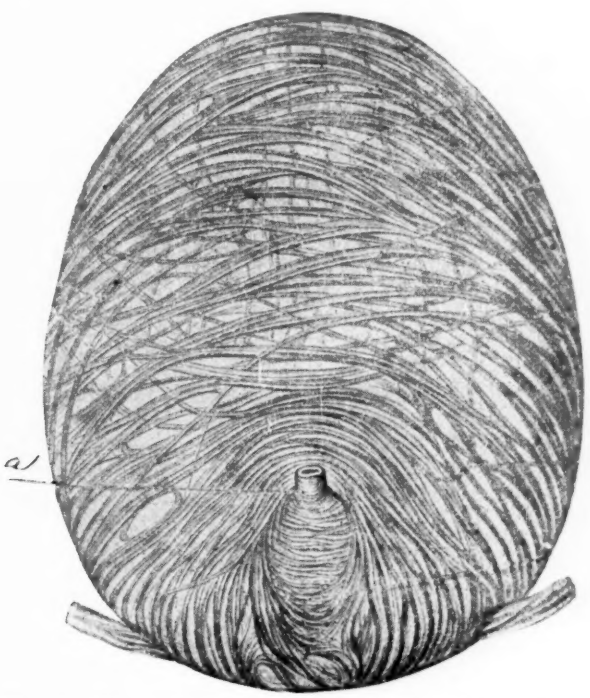

Fig. 7.—Shows the muscle fibers of the bladder and the sphincter vesicæ internus (a) with prostate removed.

The development of forceful and scientific procedures in the treatment of prostatic lesions has scarcely kept pace with operative procedures in other fields of surgery. It has, however, though tardily, developed on the same lines as its analogous organ in the female—the uterus—and the surgery of the prostate is now rapidly taking definite form on rational mechanic, anatomic and histologic bases. During the last quarter of a century the sufferer presented a lamentable picture: Usually a man of great energy, strong mentality and physically robust, indefatigable in his labors, and by these qualities had gained a competence whereby he could spend his declining days in comfort and the pursuit of pleasure were it not for his prostate. By this he was deprived of sleep, suffered intensely from pain, and saw no hope of relief except in death. This picture may not

fit the few, but it does the many who suffer to a pathologic degree from prostatic enlargement.

Temporary catheterization is resorted to for the relief of urinary retention which comes on after some undue exposure, acute illness or traumatism. It should be done with all aseptic precautions and with greatest gentleness in mechanical manipulation. It can always be accomplished where there is absence of stricture of the urethra anterior to the prostate. There is no such condition as prostatic stricture. The urethra is always patent in its prostatic portion, and the obstruction offered to the passage of the catheter is caused by deformity of the canal, urethral pockets, prostatic sinuses and compression of the urethra by encroachments on its lumen from various directions by the enlargements or neoplasms in the prostate itself (Fig. 8). All of these occur on the posterior and lateral walls of the urethra; the anterior wall offers no obstruction. The ideal course of the catheter, therefore, is along the anterior wall of the urethra. It is only a question of proper manipulation and an estimate of the directions of the canal, for the successful performance of temporary catheterization. In this, force must play no part. It should and can always

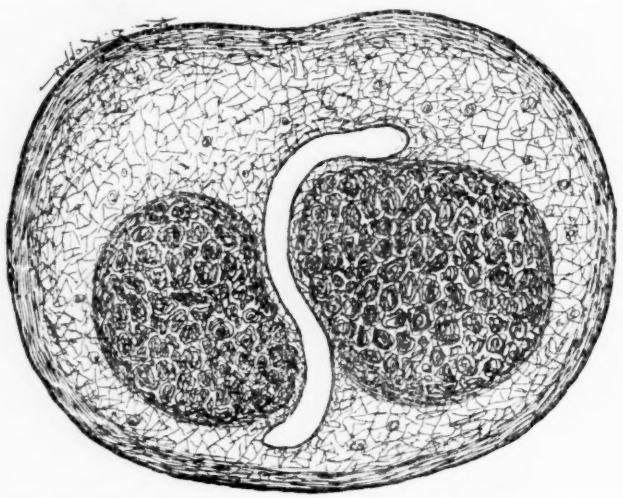

Fig. 8.—Shows changes in the shape of the urethra, produced by myomata (transverse section).

be accomplished by those of skill and experience, and the patient never forced to an immediate operation under these circumstances, when he is often in an unfavorable condition for operative procedure. The soft rubber catheter, with or without lead stilet, and the coudée catheter, preferably of large size, are the best instruments to use. In these primary retentions the bladder may be completely emptied without danger. Continued or chronic retention presents to the surgeon many distinctly different as well as dangerous phases. Here the bladder is often enormously enlarged, its veins are compressed, the walls anemic from pressure, the arteries frequently dilated, and advanced pelvic or peripheral renal changes may have taken place. Because of this protracted compression of the combined urinary surfaces, care must be exercised that this pressure is not too suddenly relieved, i. e., that the bladder is not completely emptied; otherwise, as we have found by experience, there is an immediate congestion of the urinary surfaces, and frequently shock, chills, fever and death. A chronic sufferer from vesical distention should never have his bladder completely emptied in a primary catheterization.

PROSTATECTOMY.

It is gratifying to note the advances that have been made by the medical profession in the operative treatment of prostatic enlargement in very recent times. Even so modern a man as Sir Henry Thompson said that he did not believe it was possible to operate on a case of enlarged prostate and have a result that would permit him to discontinue his catheter and still be able to empty the bladder and retain the urine. Now we know that these results are of daily occurrence.

The indications for prostatectomy are: (1) Prostatic enlargement to a pathologic degree, i. e., sufficient to prevent urination or cause large residual retention; (2) painful and frequent urinations; (3) as a cure for catheter life; (4) as a cure for secondary cystitis; (5) for the relief of pressure on the rectum; (6) painful and continuous priapisms of the aged, with perineal irritation and with or without emissions. It should be the

Fig. 9.—Showing hook retractors in place.

operation of election where the patient is in condition to withstand operative procedure and the local and general conditions are favorable. The operation should not be considered nor used as a last resort. Local or spinal anesthesia should be preferred in selected cases, or better, epidural injections of 1 gram of a 1½ or 2 per cent. solution of cocain into the sacral canal through the hiatus sacralis, passing the needle up to the second sacral vertebra, that is 2½ inches in the bony canal above the notch.

SUPRAPUBIC PROSTATECTOMY.

Dr. William T. Belfield of Chicago deserves the honor of being the first to follow a deliberate plan for the removal of the middle lobe through a suprapubic incision. This was not an accident, as suggested by G. Buckston Browne, but was a deliberately planned and executed operation, as was well known to many of the Chicago

profession at the time. The honor is incontrovertibly his, while Dittle's operation was not deliberately planned and executed, but was done in an emergency. Mr. McGill and Mr. Atkinson of Leeds laid down more definite indications and lines of procedure three years after Belfield's original work, although we believe it can be said that McGill had no knowledge of the Chicago surgeon's technic at the time he performed his first operation.

The suprapubic route was the one uniformly followed in my ten years' service at the Alexian Brothers' Hospital. Either enucleation or cauterization was accomplished through a suprapubic opening, with the aid of curved scissors, Kocher dissector, volsella forceps and the index finger. The middle lobe was readily and easily enucleated, but the enucleation of the lateral lobes through the suprapubic opening was always a difficult, bloody, dark and unsatisfactory procedure, though many times gratifying in its relief to the patient. In the suprapubic operation there is practically no danger of opening the peritoneum, as the base of the prostate is situated fully half the length of the bladder below the most dependent portion of the vesico-rectal fold, and is very movable at that point. There is danger, however, of lacerating the rectum. To Mr. Freyer belongs the credit for the reinstatement and present advanced standing of suprapubic prostatectomy. The reports of his cases show very gratifying results. Moynihan of Leeds has had an equally gratifying experience with this method of removal. From a perusal of his article, however, it is clear that his drainage was not satisfactory, as he frequently resorted to irrigations of the bladder with 1 per cent. carbolic acid solution. The immediate urinary control and absence of urethral fistulæ are in favor of this operation, although the suprapubic leakage was annoying and lasted as long as fourteen weeks in one case. It persisted about seven weeks in the average case, but in one was closed on the fifteenth day.

Mayo Robson, years ago, 1887-1894, enucleated and excised large masses of the prostate suprapubically with very satisfactory results. The original operation, however, he desires, through a personal letter to me, to be credited to Mr. Leonard Atkinson, to whom he says is due the credit of the first enucleation of myomata of the prostate. Mayo Robson, in his able article, has left the stamp of his genius on this as well as on all other branches of surgery to which he had devoted his attention.

Dr. Ramon Guiteras collected 153 prostatectomies. Of these 110 recovered, 72.3 per cent.; 25 died, 16.4 per cent.; 17 were failures, 11.2 per cent.; and he concludes that the results in those that recover after prostatectomy are better than those following prostatotomy. He believes, however, that great care and judgment must be used in the selection of cases, and submits the general rule that "the large glands are favorable for enucleation and the small ones are best treated by prostatotomy. If the kidney be diseased, either medically or surgically, the Bottini should be resorted to."

(To be continued.)

Improved Technic of Agglutination Test of Typhoid.—E. Weil of Hueppe's Hygienic Institute at Prague announces (*Prager med. Wochenschrift*, May 12) that the most favorable temperature for the agglutination test is not 37 C. (99 F.) as hitherto assumed, but between 50 and 55 C. (122 and 131 F.) Agglutination occurs much more rapidly and more decidedly when the bacilli are thus warmed beforehand.

THE CULTIVATION OF THE SURRA TRYPANOSOME OF THE PHILIPPINES.

FREDERICK G. NOVY, Sc.D., M.D.,
Professor of Bacteriology, University of Michigan.
WARD J. McNEAL, A.B.,
Fellow of the Rockefeller Institute for Medical Research,
ANN ARBOR, MICH.
AND
CHARLES B. HARE,
Government Bacteriologist,
MANILA.
(From the Hygienic Laboratory, University of Michigan, Ann Arbor, Mich.)

Although the *Trypanosoma evansi*, the cause of surra, was discovered by Evans in India as early as 1880, and the disease itself has been studied exhaustively by Lingard (1893-1896), relatively but little attention has been given to the parasite itself. Koch, while in German East Africa in 1898, described the disease prevailing in that region as surra, because he was of the belief that surra and nagana or the tsetse-fly disease were identical. Bruce himself, in his work on the latter disease in 1894, inclined to the view of a possible identity of the trypanosome studied by him with that of Evans. Various other workers have held similar opinions, and even as late as last year Musgrave and Clegg[1] conclude that surra, nagana, mal de caderas, and probably dourine, are the same disease and that all are caused by *Tr. evansi.*

The immunity experiments of Laveran and Mesnil[2] and those of the late Professor Nocard, as reported by Vallée and Carré,[3] however, show conclusively that surra, nagana and mal de caderas are distinct entities notwithstanding the marked similarity in the symptoms of these diseases. Moreover, the difference in the morphologic characteristics of these organisms as shown in stained preparations, even when these are made from the same kind of animal, as for instance the white mouse, are such as to leave little doubt that they are distinct species.

A further and perhaps even more conclusive method of differentiation is to be sought for in the cultural characteristics of the trypanosomes found in these diseases. Thus, it has been shown that in artificial culture the *Tr. lewisi* is wholly unlike *Tr. brucei.* If, therefore, surra and nagana are one and the same disease, as has been asserted by some observers, it is evident that the cultures obtained from these sources must be identical in every respect. On the other hand, if such cultures show distinct differences, it can mean only one thing and that is that the organisms, and hence the diseases, are wholly unlike.

In order to approach this question it was necessary to secure living surra trypanosomes. These could not be obtained by direct shipment of the infected blood for, like those of nagana, they die out within a few days after the removal of the blood from the body. Accordingly, another procedure was resorted to. One of us (Mr. Hare), before leaving for the Philippine Islands last summer, was requested to inoculate blood agar tubes with surra blood and ship these to Ann Arbor. Inasmuch as this medium was the same as that employed for the cultivation of *Tr. lewisi*[4] and of *Tr. brucei*,[5] it was

1. Bulletin No. 5, Bureau of Government Laboratories, Manila, 1903, p. 187.
2. Comptes rendus Acad. Sc., June 22, 1903, p. 1529.
3. Ibid., Oct. 19, 1903, p. 624.
4. Contributions to Medical Research, dedicated to Victor Clarence Vaughan, Ann Arbor, Mich. 1903, George Wahr, p. 563.
5. THE JOURNAL A. M. A., Nov. 21, 1903.

assumed that, out of a series of tubes thus sent, perhaps one or more would reach their destination with living and even multiplying trypanosomes.

The first shipment was negative, but the second, consisting of three tubes, was even better than was anticipated. These tubes of blood agar were inoculated on January 1 with the blood of an American cow suffering with surra. The inoculated tubes were kept for three days in cold storage, after which they were shipped to Ann Arbor, where they arrived February 8, or 38 days later.[6]

One of the tubes was fairly rich in motile trypanosomes, the second was even better, while in the third they were very abundant. The appearance and size of the organisms were such as to leave no doubt but that they had developed *en route* and that the material received was in reality a culture of the Philippine trypanosome.[7]

It was evident at the outstart that the trypanosomes in this culture were entirely different from *Tr. lewisi* and *Tr. brucei*. Thus there was an entire absence of the groups or rosettes which are so characteristic of the cultures of these two organisms. The trypanosomes were all single and actively motile. They traveled as readily with the flagellum in the rear as with it in front. Another striking feature was the size of the cell, and especially the length of the flagellum. An even more marked characteristic was the presence and peculiar arrangement of granules within the cells and the distinct yellowish or greenish color of the granules and of the contents.

The contents of the cell in the case of the cultivated *Tr. lewisi* are colorless and almost homogeneous; at most, but a few very minute granules can be made out. On the other hand, *Tr. brucei* presents a striking contrast, since in cultures it shows one or two very large, bright and highly refracting globules in the otherwise homogeneous, colorless cell. The new trypanosome, however, showed large numbers of small granules or globules which varied from 0.3 to 0.5 μ in diameter. These globules, as well as the contents of the cell, possessed a decided yellowish or greenish color, an appearance quite unlike that of either of the other two trypanosomes. The globules were usually massed in the anterior third of the cell, that is, at the base of the flagellum and only a few isolated granules were scattered through the remainder of the organism. (See Fig. 1.) In the divisional forms the granules were arranged in two parallel rows, as shown in Fig. 2, thus imparting a very characteristic appearance to the organism. Only exceptionally were individuals to be found which contained one or several large globules, 1 to 2 μ in diameter instead of the arrangement described. The latter may, perhaps, be looked on as dying or degenerating forms.

The trypanosomes thus received were apparently in perfect condition and had all the appearance of a healthy culture. As already stated, they were always single and were extremely motile, traversing the field of the microscope at great speed. When the flagellum was in front the side-to-side lashing was marked, whereas, when it was in the rear, the cell traveled with a rapid, straight, dart-like motion. The slender body terminated at one end in a delicate flagellum, which was usually as long and often even longer than the cell itself. Thus, the body of one large individual measured 21 μ while the flagellum was 28 μ in length.

The posterior end, especially when blunt, showed a rod-like tip or stylet, which varied from 2 to 4 or even 6 μ in length. (See Figs. 1 and 2.) The undulating membrane was not recognizable in the living organism.

The total length of the trypanosomes, as might be expected in a culture, varied considerably. The exceptionally long forms measured from 40 to 50 μ. Most of the individuals ranged from 25 to 35 μ. The width of the cells varied from 1.5 to 2.5 μ.

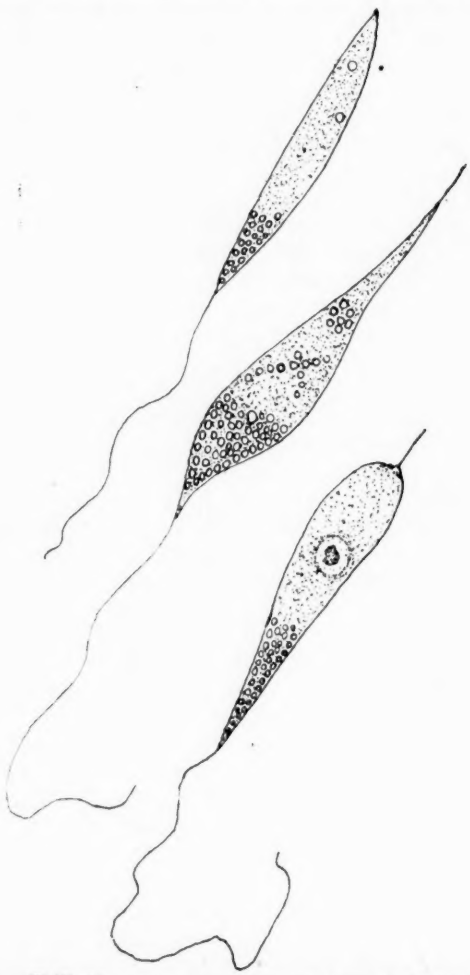

Fig. 1.—Philippine surra trypanosomes, from thirty-eight-day culture and drawn from a living preparation. Magnification, approximately 3,000 ×.

As the cultures aged pear-shaped or spherical highly granular involution forms appeared. In the former type, measuring about 3 by 5 μ, the end was often provided with a flagellum 10 to 15 μ long, which still showed a slow lashing movement though the cell itself was motionless. The spherical forms varied from 4 to 9 μ in diameter, were very granular and often showed a remnant of the flagellum as a short, stiff, motionless whip. These involution forms, as in the case of *Tr. lewisi* and *Tr. brucei*, eventually gathered into large

6. Since writing the above we received a third shipment of 3 tubes of inoculated blood-agar. The medium used was 3 to 2, 1 to 1 and 1 to 2. The tubes were 39 days en route and on their arrival showed no sign of trypanosomes.

7. Since the publication of the work on the cultivation of *Tr. lewisi* Laveran and Mesnil have endeavored to apply the same method to the trypanosomes of surra and caderas. Under date of December 18 Dr. Mesnil wrote to one of us (Novy) that they had obtained with surra encouraging results quite analogous to those obtained by us with *Tr. brucei*. Just how far they were successful in their experiments we are unable to state, since they have published nothing on the subject. It may be stated in this connection that the culture of *Tr. lewisi* begun on May 16, 1902, and grown at room temperature, is now in its twenty-sixth generation. The other strain which we reported on, begun Dec. 4, 1902, and grown at 34 to 37 C., is at present in its sixty-seventh generation. The culture A of *Tr. brucei*, which was started Aug. 27, 1903, is now in its twenty-seventh generation.

groups or masses, which at times filled the field of an oil immersion lens. Later on, perhaps as a result of autolysis, the round bodies broke up into masses of very minute granules.

The tube which contained the fewest organisms was the first to lose them. No living forms were found in it on the forty-eighth day. It is noteworthy, however, that in the richest tube the trypanosomes were still alive, though very few, on the sixty-fifth day. Under an ordinary cover-glass on a slide the organisms remained alive for many hours. In one instance where complete desiccation was prevented, by the formation of a dried ring, a few were still alive after fifty-two hours.

Immediately on receipt of the culture tubes several

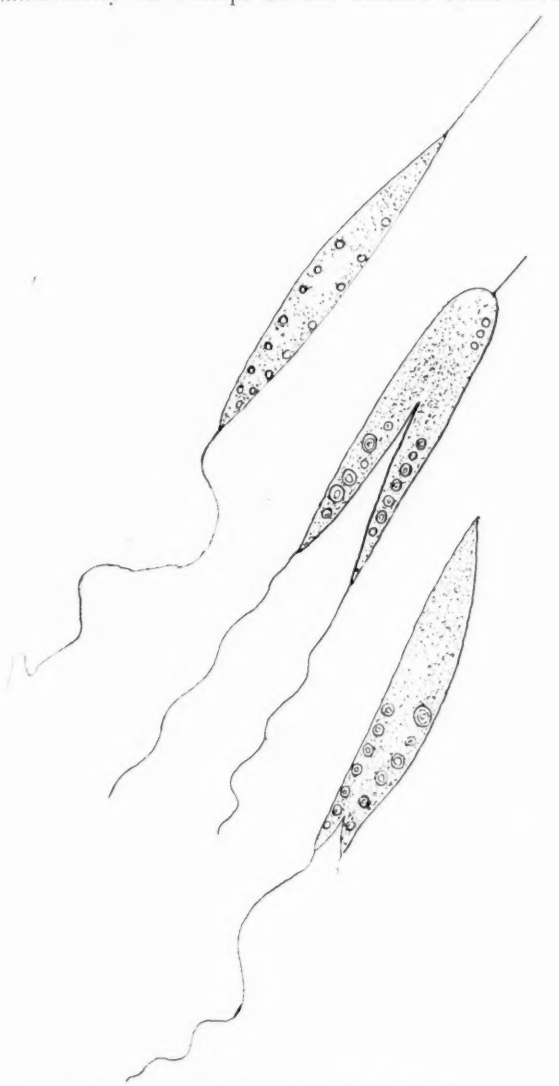

Fig. 2. From same preparation as Fig. 1.

attempts were made to inoculate animals and to obtain a second generation. It was particularly desirable to secure an infection of animals, for in that event a constant supply of surra material could be maintained and this would serve as a point of departure for further cultivation experiments in case the original material failed to yield subcultures. It may be said in advance that all these attempts at inoculating animals and obtaining subcultures proved fruitless. Only a brief mention need be given, therefore, of these experiments.

A portion of the fluid from the thirty-eight-day culture, richest in trypanosomes, was injected into the peritoneal cavity of two white mice, two white rats and a guinea-pig. The mice and rats each received two drops, while the guinea-pig received a quarter of a cubic centimeter of the liquid. The blood of these animals was examined every day or two for a month for the presence of trypanosomes, but none could be found. The mice and rats remained alive and in perfect condition. The guinea-pig died on the thirtieth day, but at no time did it show any parasites in its blood. The heart blood drawn immediately after death gave a culture of a very minute bacillus. In order to detect, if possible, any trypanosomes that might be present, portions of this blood were injected into each of two white rats and two guinea-pigs. Both rats died on the sixth day and one of the guinea-pigs died on the seventh day. Notwithstanding daily examinations trypanosomes could not be detected in the blood of these animals. The heart blood of these animals gave a culture of the small bacillus mentioned. The second guinea-pig remained alive and in good condition for nearly two months. It was evident from these inoculations that the first guinea-pig did not die of trypanosomiasis, but of an infection following on the repeated examinations of its blood.

On February 18, when it was evident that the above animals would probably fail to develop a trypanosome infection, possibly because the dose employed was too small, the entire contents of one of the tubes was inserted under the skin of a guinea-pig. This inoculation likewise failed to infect.

The failure to produce infection in animals by the inoculation of the thirty-eight and forty-eight day culture of this trypanosome corresponds to the observations which have been made on *Tr. brucei*.[8] In the latter case first generations, 29 and 38 days old respectively, failed to infect mice. It would seem as if the unfavorable conditions under which the first generation is developing results in an early and complete loss of virulence. Since, in the second and subsequent generations of *Tr. brucei* this virulence is largely restored, it was hoped that a like result would be met with in the subcultures of this trypanosome. This hope, however, was not realized, for notwithstanding numerous and varied attempts to secure such subcultures, all efforts failed.

Between February 8 and March 1 seven attempts were made to secure a second generation. In all 38 flasks and tubes of blood-agar were inoculated. The blood-agar mixture varied from 1:1 to 2:1; the proportion of beef and water from which the meat extract was prepared for the nutrient agar varied from 1:1 to 1:8; and again the amount of sodium carbonate used in the preparation of the agar varied from nothing to 20 c.c. of the normal solution per liter. The nutrient agar contained as a rule 2 per cent. of agar and a like amount of peptone together with a half per cent. of salt. The inoculated flasks were kept at 5, 15, 25 and 34 degrees, but without avail. At no time was there any indication of a second generation.

It will be seen from the foregoing that the first generation, in artificial culture, of the trypanosome of the Philippine surra, was incapable of developing either in the animal body or in the culture media. The failure to obtain a second generation in this case must be ascribed to the fact that the culture was 38 days old when received and that the trypanosomes notwithstanding their apparently excellent condition were too enfeebled to reproduce. An exactly similar behavior, it should be noted, has been observed in connection with *Tr. brucei*, where the first generation, 29 days old, failed to infect

8. Journal of Infect. Diseases, vol. I, p. 21, 1904.

animals or to yield subcultures on blood-agar media. It is possible, however, to obtain cultures from a first generation of the nagana trypanosome at a much later date than that just given, provided the amount of salts and other extractives in the medium employed are decreased. Under such special conditions it was possible to obtain a subculture from a first generation of *Tr. brucei* when 52 days old. Without doubt, under like conditions, a similar result can be obtained with the Philippine and other trypanosomes. Obviously no difficulty should be experienced in securing transplants from a first generation if such attempts are made on about the third to the fourth week.

The foregoing observations, although they are by no means as complete as we would like them to be, are nevertheless quite sufficient to show that the trypanosome of the Philippine surra is distinct from that of the South African nagana. It seems to us that there can not be any question on this point.

The studies of the past ten years have shown that there are not less than six very important trypanosomatic diseases in Africa. These diseases are (excluding those of rats, birds, amphibians and fish): nagana, dourine, galziektè, zousfana, Gambian horse disease and human trypanosomiasis. The latter designation includes the Gambian or trypanosomatic fever of Dutton and Forde and the so-called sleeping-sickness, which really are but different stages of infection due to *Tr. gambiense,* a fact which has been established by Bruce, Manson and Laveran.

Fig. 3. Photograph of trypanosome of Mauritian surra, from blood of mouse. Preparation stained by Romanowsky-Nocht method. Magnification, 3,000 ×.

In Asia, on the other hand, ever since the work of Evans in 1880, only one trypanosomatic disease has been recognized, namely, surra. This fact serves to indicate the need of a careful comparative study of this disease as met with in different parts of Asia and in the adjacent islands. It is more than probable that the term surra will be found to cover several distinct infections. On this point we have one observation to offer which is very suggestive and which obviously will require further study to insure its correctness.

Some time ago we obtained, through the courtesy of Dr. Mesnil of the Pasteur Institute, a number of preparations made from the heart blood of a mouse infected with the surra trypanosome brought from the island of Mauritius. A comparison of the preparations having this origin with one from the Philippine Islands shows that the two organisms are quite unlike. In making this comparison the large Zeiss microphotographic apparatus was used to advantage. The individual trypanosomes were studied on the ground glass plate at a suitable magnification, such as 3,000 diameters. Microphotographs taken at this magnification were very useful for measurements and other studies. The length of a trypanosome was ascertained by tracing a string along the border opposite the undulating membrane, from end to end, and then laying this off on a ruler. At a magnification of 3,000 diameters a micron corresponds to 3 mm. It is consequently possible to measure the length of a wavy object in this way more accurately than with an eyepiece micrometer. The total length of the Mauritian trypanosome (see Fig. 3), was on an average 33 μ; the free flagellum was 13 μ, while the width, not counting the wavy expansion of the undulating membrane, was about 1.5 to 1.7 μ. The total length of the Philippine trypanosome (shown in Fig. 4) was from 22 to 25 μ; that of the free flagellum was 8 to 10 and the width was from 1.3 to 1.7 μ. A marked difference, therefore, exists in the lengths of the individuals and of their free flagella. Moreover, the free end of flagellum in the Mauritian trypanosome is enlarged, whereas that from the Philippines shows no such peculiarity.

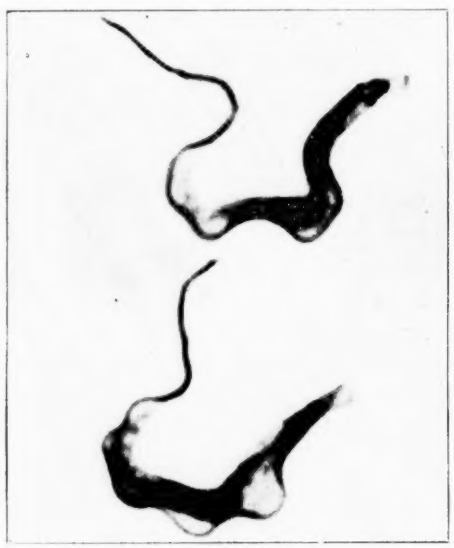

Fig. 4. Photograph of trypanosome of Philippine surra from blood preparation. Magnification, 3,000 ×.

An even more marked difference can be seen in the shape and distance of the centrosome from the end. Thus, in the Mauritian trypanosome this distance measures 3.3 to 4 μ, while in that from the Philippines it is only 1 to 1.6 μ. In the latter case the centrosomes were nearly all elongated preparatory to division. The heavy printing of the photograph, necessary in order to bring out the faint posterior end, has concealed the centrosome in the lower individual.

The undulating membrane was more developed in the Mauritian trypanosome than in that of the Philippines. In the former it shows four distinct waves which are very suggestive of *Tr. brucei.* In the Philippines trypanosome two or three less marked waves represent the undulating membrane.

Another point to which attention may be called is the presence of heavily stained granules in the anterior half of the Mauritian trypanosome. The posterior half

of the body is quite free from these bodies. On the other hand, the Philippine trypanosome stains heavily in the posterior two-thirds.

Obviously too much importance must not be attached to comparisons made under these conditions, especially since the Philippine preparation was stained before it was sent. The observations given seem to indicate that they are two distinct organisms. The proof of this view can be supplied in part by the study of preparations made from the same kind of animal, such as the white mouse or white rat, obtained from different regions where surra is said to exist. A positive demonstration, however, can be made either by the immunity experiment such as has been done by Laveran and Mesnil in their studies on nagana, caderas and the Mauritian surra, or by the cultural method which we have employed.

CONCLUSIONS.

Summing up the main facts presented in this paper we may say that:

1. The trypanosome present in the Philippine surra can be cultivated artificially.

2. Attenuated cultures of this organism can be obtained as in the case of *Tr. brucei*.

3. This trypanosome is differentiated by its cultural characteristics from *Tr. lewisi* and from *Tr. brucei*.

4. The Philippine surra is, therefore, a distinct disease, different from nagana, and this observation confirms the work of Laveran and Mesnil on the non-identity of nagana and the surra of Mauritius.

5. The morphologic differences between the Mauritian and Philippine trypanosomes suggest the probability that these organisms are distinct species and hence that the term "surra" covers a group of closely allied diseases.

A CONSIDERATION OF SPEECH DEFECTS.

JAMES M. BROWN, M.D.

CHICAGO.

In laryngologic practice attention is frequently directed to cases of defective speech, and it is hard to realize how so important a branch of medicine is almost wholly ignored by the profession. The treatment of these distressful ailments is left, with few exceptions, to the advertising quacks, each of whom has his separate guaranteed quick method, which, on investigation, has been proved unsuccessful. All forms of speech defects, known by various terms as dyslalia, magilalia, lallamania, balbuties and psellism, have been generally classified as stammering and stuttering, with the exception of lisping, which is the most difficult of speech defects to correct. Considerable ignorance of this subject prevails among those who have the care of children, and in children defects of speech are comparatively common. Speech defect is usually observed first between the ages of five and fifteen, and is productive of much distress, and often results seriously. The average person is born with all the organs of speech necessary for correct articulation, but some have a physical defect which may interfere with articulation, or they may be afflicted with the disease which will obstruct the proper course of articulation.

Notwithstanding the nervousness which is manifested by the majority of stammerers, they are rarely persons whose nervous symptoms are impaired. The nervousness is often associated with speech, more as a result and not as a cause, as we are prone to believe. Heredity has been proved to take little part in the etiology. The defect may be considered to be more of a habit, and often can be prevented by proper training in childhood.

The paralytic defects of speech that are due to lesions of the medulla involving the co-ordinate centers, or the nuclei of the origin of the nerves concerned, and known as glosso-labio-laryngeal paralysis, are of a progressive order. The author agrees with Potter, who is of the opinion that no medical investigation of this subject is complete without reference to the opinions of Hippocrates, Aristotle and Galen, each of whom made many observations concerning stuttering, but which were more curious than valuable. Hippocrates maintained that there existed among stutterers a chronic diarrhea, and he "dilated on the cure by varices, the cure resulting in suppurating ulcers." Aristotle, on the other hand, ascribed the defect to the tongue, while Galen believed it to be due to "moisture" of the brain and "muscular debility" from cold.

The subject of speech defects was considered very early, as is shown by the interesting observations of the historically famed Greeks, or even before them, as it is said that Moses was afflicted with a speech difficulty, and, with few exceptions, most writers advance the opinion that the tongue is the most frequent cause of the affection, due either to an abnormality or defective use of it. Santorini, in 1705, attributed the cause of defective speech to the abnormal size of "two holes in the middle region of the palate," meaning the palatine canals. Darwin, in 1800, ascribed stuttering to interrupted association of movements in the organs of speech caused by sensations or emotions. Kussmaul, in 1879, defined stuttering as a laloneurose or impairment of speech arising from the spasmodic action of the nerves, including stammering and aphthongia, which is a peculiar form of aphasia due to spasm of the muscles supplied by the hypoglossal nerve.

In analyzing the views of older authorities, we may divide them into three classes:

1. Those who believed the cause of defective speech to be the tongue, tonsils, larynx and palate.

2. Those who held the theory of psychical causation, and who generally aimed at education of the will power to overcome the defect.

3. Those who considered the essential causal feature to be a deranged nerve center, or lack of strength in the co-ordinating powers.

The more modern authorities on this subject seem to consider the various causes that have been enumerated, but they pay particular attention to abnormalities of the upper air passages and their correction, followed by proper respiratory and vocal exercises.

Among the primary causes first observed in children are fear, timidity, a fall or ill treatment. Imitation lies at the bottom of many conditions, as in childhood this faculty seems to be more highly developed than at any other period of life.

Dr. G. Hudson Makuen, the foremost American authority on this subject, states that "operations have been performed on the tongue for the cure of stammering, but have fallen in repute for lack of rational and scientific reasons." He reported a case before the Philadelphia County Medical Society of unusual interest. The patient had never uttered four syllables intelligently. Examination showed a congenitally short geniohyo-glossus muscle of the tongue, which was divided, and after suitable instruction the patient was able to recite better than the average person. He reported a series of 200 cases of speech defects that he had ob-

served, 140 of which were stammerers, the remaining 60 representing different varieties of vocal and speech defect. Ninety-five per cent. of the cases were males; their ages ranged from 6 to 53 years; 32 per cent. had stammered from the inception of the speech development; 52 per cent. began between the ages of 3 and 10 years; 2 at 11 years; 1 at 12; 1 at 14, and 2 at 15 years of age. Whooping cough, measles, scarlet fever, diphtheria, smallpox and a hereditary history of consumption and insanity were important causal factors in several cases.

The same author also reports an interesting case which was due to the presence of adenoids. A patient, who was recently under the writer's observation, showed marked improvement after the removal of hypertrophied faucial tonsils.

The continuous production of voice is the essential of speech. To accomplish this, a strong, unbroken stream of sound is necessary, and no mouth action should be allowed to interfere with the throat sound. There is no trick or particular method that is applicable for the treatment of all cases. If possible, the cause should be first ascertained, and then treatment instituted for ultimate relief. In many cases, the main point to be remembered is the easy passage of air, with attention to the proper placing of the voice, that being the material of speech, and should not be impeded in any way. Training for continuous production gradually enables one to become familiar with all vocal elements. Self-observation and control, eradication of the spasmodic actions, together with patience and perseverance, will, in many instances, permanently overcome the distressful, embarrassing impediment in speech.

Special Article.

THE ARMY MEDICAL SERVICE.

IV.

(*Continued from page 1354.*)

The work of medical officers of the Army is directed primarily toward the maintenance of the health and physical and moral vigor of the personnel, and secondly, toward the care of the sick and wounded. Of the latter work, which includes the administration of military hospitals, the furnishing of medical and surgical supplies, the providing of sick diets, and the directing of the nursing and professional care of the sick, the Medical Department has complete control. A medical officer's duties, therefore, are of three kinds—sanitary, administrative and professional. On entering the service his medical education presumably has prepared him for the latter duties, but before he can become an efficient medical officer he has much to learn. What special knowledge and military training is necessary may be seen by glancing at the course of instruction in the Army Medical School. The subjects of the curriculum not usually covered in medical schools are as follows: Military hygiene, military surgery, military medicine, equitation, hospital corps instruction, duties of medical officers in war and in peace.

The last named branch is regarded as the most important. Its scope is shown by an outline of the subjects covered during the last session of the school:

DUTIES OF MEDICAL OFFICERS IN WAR AND IN PEACE.

(*a*) The organization of the Army.

(*b*) The rank and precedence of officers and non-commissioned officers.

(*c*) Responsibilities of command.

(*d*) Military discipline, its necessity, its object, and the means of imparting it.

(*e*) The duties of the Medical Department.

(*f*) Medical department administration—covering the subjects of military correspondence, property, pay, clothing, rations, enlistments, sanitary reports, sick and wounded reports, reports relating to the personnel, and army regulations in so far as they relate to the medical officer and to his administrative duties.

(*g*) The organization and administration of military hospitals.

(*h*) The duties of post surgeons.

(*i*) Military justice.

(*j*) Customs of the service.

(*k*) The duties of the Medical Department in the field—the work to be done and the organization and equipment necessary to perform it; the principles on which field medical organization is based; the organization, equipment and duties of each field unit on the march, in camp, and during an action; the organization on the lines of communication and at the base; the administrative duties of medical officers in the field; practical instruction in field work.

When the Army takes the field, the duties of the Medical Department become greatly increased in importance and in scope, and as with other parts of the Army, it is only by careful preparation in time of peace that success in war is to be expected. To guard the health and physical and moral vigor of the troops is the first duty of the medical officer, and his training and study should be such that he is prepared to anticipate and successfully to meet the problems which may confront him in camp and in campaign. Next to his duties as a sanitary officer comes that of the care of the sick and wounded. From the time a man falls in action or is taken ill until he is cured, is discharged, or dies, the Medical Department is charged with his care and transportation, at dressing stations, in field hospitals, ambulances, hospital trains, hospital ships, base hospitals, and convalescent camps. This work requires thorough organization, proper equipment and careful training of the personnel.

On entering the Medical Department, the young medical officer has the rank, pay and allowances of a first lieutenant of cavalry, and after five years' service becomes a captain, provided he passes the required examination for promotion; above the grade of captain promotion is by "seniority", i. e. promotion occurs by reason of length of service, the senior in one grade being promoted when a vacancy occurs in the next higher grade. Promotion to the grade of major is, however, like that to captain after examination.

A medical officer's status as regards privileges of rank, pay, and emoluments, is the same as that of other officers. A commission in the Army is for life, provided service and conduct are satisfactory. Beside the actual pay, the emoluments and privileges add much to the value of a commission. An officer is entitled to quarters at military posts, which he has the privilege of selecting according to his rank. At stations where no quarters are provided, he receives commutation in money therefor. His home and grounds are cared for and kept in repair by the government, without expense to himself. He has the privilege of purchasing from the government, at cost price, commissary supplies, fuel, articles of bedding, clothing, and field equipment. In money value these emoluments are believed to equal one-third of an officer's pay. Stables and forage are provided without expense for the horses allowed mounted officers. An officer is entitled to one month's leave of absence each year on

full pay, which may accumulate until four months have become due. Pay does not cease during illness, and officers and their families are entitled to medical attendance and supplies. An officer disabled while in the service is retired on three-fourths pay, and his retirement on the same pay is compulsory on reaching the age of sixty-four years.

Length of service adds materially to an officer's emoluments and pay. Beside the increased pay of the higher grades, an officer's pay is increased 10 per cent. for each five years of service, until 40 per cent. has been added. By reason of increased rank he is entitled to larger and more desirable quarters, or to additional commutation therefor. In addition to the advantages here mentioned, in the Medical Department increased rank means more important duties and more desirable stations. On change of station, officers receive seven cents per mile for the distance traveled and free transportation of baggage, horses and household effects within a certain limit.

The pay of all grades of medical officers here given is that of the grade alone and does not include the increase for length of service,[1] except in the case of a brigadier general.

	Per Year.
First lieutenant	$1,600
Captain	2,000
Major	2,500
Lieutenant colonel	3,000
Colonel	3,500
Brigadier general	5,500

There are unusual opportunities in the medical service of the Army for independent work and investigation. At nearly all stations medical officers have at their disposal well equipped operating rooms, bacteriologic and chemical laboratories, and medical libraries. The libraries are kept up to date by frequent additions, and books on special subjects may usually be obtained on application to the surgeon general. The leading military and medical journals reach all posts. The post hospital constitutes for the medical officer an almost independent jurisdiction, as he directs and controls most matters relating to it. The surgeon is, however, subordinate to the post commander, the latter being held responsible for the efficiency of every part of his command. Medical officers frequently serve on investigating boards of various kinds and are frequently detailed to make special investigations in this country and abroad. The boards appointed to investigate the prevalence of typhoid fever in camps in 1898, and to investigate yellow fever in Cuba, in 1899, were composed of medical officers. The findings of these boards mark epochs in the advancement of preventive medicine and have become matters of history.

The list of medical officers who have won distinction in various fields is a long one, and it is one of which the medical profession and the Army is proud. In this connection, the names of Beaumont, Tripler, Jonathan Letterman, Billings, Sternberg, Reed, Gorgas, and Carroll may be mentioned.

Beside the professional opportunities offered by it, which are many and ought to be satisfying to the average medical man, army life is an attractive one. Patriotism, the military spirit, and *esprit de corps* are encouraged and stimulated and a high standard of honor and of gentlemanly conduct is insisted on. Military discipline and orderly routine conduce to contentment. In the service, many of the worries and uncertainties of civil life are unknown.

Where everything is ordered with the one regard of advancing the soldier's physical well-being and contentment, athletic and other sports find prominent places in both the Army and the Navy. At many stations excellent fishing and shooting are to be found. Practice marches and autumn maneuvers bring most infantry, cavalry and field artillery garrisons into the field for several weeks each year.

Change of station and field of work with the opportunity for travel thereby afforded, may be classed as advantages which are not enjoyed by the average medical man. A medical officer in a few years' service will have seen much of the world and have served in many interesting parts of his own country. Service at stations in the east, west, and abroad is equalized as far as possible. Frequently an officer is given the opportunity of naming the station he most desires among those where vacancies exist. The present tour of foreign service is three years, during which an officer receives 10 per cent. increase in pay. As it is probable that there will be one-third or one-fourth of the Army serving abroad, it would seem that two-thirds or three-fourths of the medical officer's service will, in the future, be in the United States.

As the medical officer increases in rank, his duties become more important and his stations more desirable. Beside the usual stations of medical officers at garrisons and posts, there are a number of detached and independent stations away from troops, such as the large general hospitals at the Presidio of San Francisco, at Fort Bayard, New Mexico, at Hot Springs, Arkansas, at Washington, D. C., and two or three in the Philippines; companies of instruction of the Hospital Corps, two of which are now in existence; the Army Medical School, at which there are on duty several medical officers as instructors; the Army Medical Museum, in Washington; the Surgeon General's Office; the large medical supply depots at New York, St. Louis and San Francisco; the stations as chief surgeons of military departments, of which there are ten in the United States and three abroad.

In time of peace appropriate duties for medical officers above the rank of major are those of chief surgeons of departments, medical supply officers and commanding officers of general hospitals. Those of the rank of major are usually the senior medical officers at large posts, while those lower in rank may be assistants at the larger posts and hospitals or in medical charge of the smaller ones.

Should legislation which is now pending be enacted, the important advantages of more rapid promotion and an increase in the grades of colonel, lieutenant colonel and major will add greatly to the attractiveness of the medical service of the Army.

(To be continued.)

[1] The 10 per cent. increment for length of service is called a "fogy," and an officer of twenty years' service is said to have four fogies, hence the expression an old fogy. The pay of a major with four fogies is, for example, $3,500.

Attempts at Extrabuccal Oxygen Administration.—Salomon reports from von Noorden's clinic that all attempts to supply oxygen to the system by the rectum failed. The results were more favorable from baths impregnated with oxygen. The gas was conducted into the bottom of the bathtub full of warm water, similar to the arrangements for carbonated baths. In 2 out of 7 subjects thus treated the amount of oxygen consumed from the respired air was materially diminished. In his communication to the *Zeitschrift f. diät. und physik. Therapie*, vii, 10, 1904, he states that no effect on the respiratory consumption of oxygen was perceptible when the subject was placed in an air-tight bag into which the oxygen was conducted. Similar trials with carbonic acid gas also proved negative.

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SATURDAY, MAY 28, 1904.

INSTRUCTION IN PSYCHIATRY.

The ignorance of the laity as to what constitutes insanity is proverbial. A raging maniac is the only popularly accepted type of this most subtle ailment whose manifestations include every variety of expression. The lack of knowledge on the part of not a few members of the medical profession is also marked. Those who have had the opportunity of reading the hospital history sheets of insane patients will bear us out in this statement. There are, at a conservative estimate, 150,000 insane patients in public institutions, and it is certain that only a small proportion of these are ever seen by the great alienists at any stage of their disease, while the number who are seen by them in its early and partially developed period must be even less. For the general body of the people, exclusive of the very wealthy, the only hope of any preventive medical treatment for threatening mental disorder must always lie with the general practitioner. As a rule, the family physician is a man of good ability and in most subjects his training in the better medical schools keeps pace with the most modern developments of medical science, but this can not always be said to be true of his training in psychiatry. An examination of the courses of study of the principal medical schools in this country reveals only too plainly that the fountain must indeed rise higher than its source if the general practitioner is to know much of mental diseases.

The latest bulletins of twelve of the leading medical schools show that psychiatry is a department which in most instances has lagged behind the other departments and has failed to keep pace with the advances of modern medical science. In the University of California, no instruction in psychiatry is offered to undergraduates. Other schools content themselves with a course which takes only a few hours during part of the senior year. Thus Cornell devotes fifteen hours to the teaching of this branch; Northwestern University Medical School, Chicago, offers one lecture a week for one-half of a semester. In Rush Medical College, Chicago, the subject is combined with neurology and the course counts as one-fifth of a major, which makes it only one-twentieth of the amount of work required in the department of medicine. Another school which treats psychiatry together with neurology is the Medical College of the University of Minnesota. It is possible that they order things better in these two schools, but usually such a course virtually means nine-tenths neurology and one-tenth psychiatry. The course in the University of Minnesota is required, but in Rush it is optional—a student may graduate without having had any instruction in psychiatry.

It is not only a question of the time allowed to each subject, but the difference is equally striking between the methods employed in this and other subjects—as, for instance, surgery. The teaching of surgery is carried on almost entirely by means of demonstrations and clinics, while the teaching of psychiatry is apt to follow the antiquated method of didactic lectures. The College of Physicians and Surgeons, Chicago; Northwestern University, Chicago, the University of Pennsylvania and Harvard are instances of such schools. Harvard has a course in clinical psychiatry, but it is not required. The University of Michigan, Johns Hopkins University, the College of Physicians and Surgeons, New York; Cornell and the Medical School of St. Louis University all require attendance on the clinics in psychiatry, although in the case of the two last mentioned the amount of work offered is very small. The clinics at Cornell occupy ten hours in all; at St. Louis University, one hour a week for one semester. Johns Hopkins University offers rather more instruction in psychiatry than do any of the other schools thus far mentioned, except the University of Michigan. Aside from didactic instruction, which is quite ample, there are clinical demonstrations in the dispensary and in the City Insane Asylum. Considering the large number of these schools which are situated within practical distance of great insane asylums, it seems strange that so few of them have arrangements for the utilization of this valuable clinical material.

The department of psychiatry of the University of Michigan is an instance of co-operation between the state institutions and the state medical schools which is plainly in the line of good public policy. The superintendents of the state hospitals for the insane are appointed special lecturers on psychiatry to the senior class, and the students are taken to the asylums for clinical instruction. There is a system of internes in the hospitals—the men usually being graduates of the university. The psychopathic hospital for acute and incipient cases, which the university has just now finished, after the example of German universities, is the first one of its sort in this country and is especially valuable for teaching purposes, as the cases seen at the asylums are inevitably chiefly of the chronic type.

We hear much of the cost to the state of every death from tuberculosis, as this disease is most fatal during the working period when each life is estimated as being worth to the state five thousand dollars. Now it must be remembered that the average insane patient is not only equally a loss to the community at the time of his commitment to an asylum, but in addition he is from that moment a heavy item of expense. It is estimated,

for instance, in New York that the average chronic insane patient costs the state six thousand dollars for maintenance, which would indicate that the cost of each case of chronic insanity (even when the very important items of family pauperism and of inherited mental defect are ignored), is more than twice that of each fatal case of tuberculosis.

The increase of insanity has become so marked and the expense of caring for its victims is so heavy a burden in every state that the necessity for some preventive measures is becoming evident even to the lay mind. Such preventive measures must be directed to the care of incipient and acute cases, and for this we need numerous and well-equipped psychopathic hospitals and numerous and well-equipped alienists among our general practitioners. For the first we must look to the general public, whose co-operation is absolutely essential for the foundation of such public and private institutions. For the second we must look to the medical schools, for it is largely through a radical change in the old-fashioned and inadequate methods of teaching this subject that we may hope to lessen the waste of life and cost to the state caused by insanity.

THE SIGNIFICANCE OF THE GLYCOGEN REACTION IN THE BLOOD.

Originally described by Gabritschewski in 1891, this reaction seems to have been overlooked until 1902, when several observers, notably Locke and Cabot[1] in this country, again called attention to its value. In 1903 Locke published a further communication,[2] in which he quite sharply defined the advantages and limitations of the test. Quite recently Lovell Gulland[3] has published the results of a long series of observations which completely substantiate the conclusions of Locke.

The test is such a simple one that it seems peculiar that it has not come into more general use. In order to make the test, a blood smear is placed face downward on a drop of a thick gummy solution of iodin and iodid of potash in gum arabic, and, after being allowed to remain for a minute to allow the action of the iodin to take effect, the excess of the solution is removed by pressure on the cover-slip or by means of filter paper. The specimen is then examined with the oil-immersion lens. In normal blood all of the cells take on a uniform bright yellow color, the nuclei of the leucocytes staining more lightly than the protoplasm and having a refractive appearance. When the glycogen reaction is present, small or large brownish granules are to be seen in the protoplasm of the polynuclear leucocytes, or else these cells take on a diffuse brownish tint. Generally, too, large or small brownish masses are to be seen outside of the corpuscles, so that we speak of an extracellular and an intracellular reaction. Very rarely other forms of leucocytes beside the polynuclears show the reaction, but this occurs so infrequently that it has no practical bearing on the test.

The glycogen, or, as Locke prefers to call it, the iodin reaction, occurs in three classes of cases—in cases with respiratory disturbances, in certain cases of anemia and in toxemias, either of chemical or bacterial origin. In the cases of respiratory disturbance, whether due to stenosis or cardiac or non-inflammatory lung disease, the reaction is usually not very marked, and disappears rapidly on the disappearance of the respiratory symptoms. The reaction is not usually present in chlorosis and mild secondary anemias, but only in severe secondary and pernicious anemia, and in acute and late leukemias. Gulland is inclined to think that the anemia *per se* is not the cause of the reaction in these cases, but that it is due to the toxemias or bacterial infections which are so common in such conditions. The reaction occurs most characteristically in cases of suppuration and bacterial infection, though it may occur in chemical toxemias as uremia or diabetic coma. It is of the greatest value in septic diseases, which are usually accompanied by a leucocytosis, but in which this sign is not infrequently lacking. In appendicitis, for example, the observations of both Locke and Gulland show that during the attack the reaction is never absent, and in many cases with obscure symptoms and without leucocytosis, its presence is of the greatest diagnostic value. Even in cases in which the diagnosis is not in doubt, the intensity of the reaction may settle the important question of the presence of pus. According to Gulland, the test may also be of value in the diagnosis of deep-seated pneumonia with few physical signs, in differentiating serous pleuritis (which does not give the reaction) from empyema, in differentiating tubercular from other forms of meningitis, and in separating cases of gonorrheal arthritis from true rheumatism. In cases of suspected strangulated hernia, the test is of value, as it is positive in cases where gangrene is present, and negative when the intestine is merely obstructed. As Locke says, and Gulland confirms the statement, the presence of this reaction always indicates that the patient is very sick.

This reaction, like all others, requires a certain amount of experience before the findings can be accurately interpreted, but it is so easily applied that it would seem worthy of a much more extended use than it is receiving at present.

1. Journal of Medical Research, vol. vii, No. 1.
2. Transactions of the New York State Medical Society, 1903.
3. British Medical Journal, April, 1904.

MODERN OPERATIONS FOR THE RADICAL CURE OF HERNIA.

Twenty years ago, when an eminent professor of surgery was asked his results from operations for the radical cure of hernia, he replied that they were so poor that he had entirely given up operating except in cases of strangulation or in other dangerous or disagreeable complications. That probably represented the standpoint of leading surgeons of that day, but with modern methods and asepsis the operation is so successful that

in most American hospitals all patients with hernia coming for consultation are advised to undergo operation. While this position is taken by the leading surgeons of the best hospitals, the truss-makers still continue to thrive, and several standard text-books may still be found in which considerable space is devoted to the description of trusses and their uses.

We believe that if general practitioners understood the safety and satisfactory results of the radical cure of hernia, the public would be more rapidly educated to seek relief for this very common trouble, as has been the case with the treatment of appendicitis. The best idea of what results are being obtained is gained by a study of the results of operators of wide experience whose familiarity with the anatomy of hernia and the best methods makes them specially fitted to operate successfully. A recent article by Hilgenreiner,[1] an assistant in Wölfler's clinic in Prag, reports eight hundred and twenty-eight operations performed since 1895. The question of first importance is, of course, the danger to life, and the extremely low death rate of less than one in four hundred operations shows how safe the operation may be in the hands of careful surgeons. The cause of death mentioned was post-operative pneumonia, from which the patient died on the tenth day after operation. Experience in eight hundred cases reported by Goldner,[2] from Hochenegg's clinic in Vienna; four hundred and fifty-nine cases reported by Bloodgood,[3] and by Coley of New York in nearly a thousand cases, show that the death rate can be brought certainly to less than one in two hundred cases.

The question of next greatest interest is the permanency of cure, and this depends on a number of factors. In Wölfler's clinic there have been no recurrences in children under fourteen years of age; also no recurrences in inguinal hernia of women. Bloodgood has shown the importance of the strength of the conjoined tendon, finding no recurrences in two hundred and sixty-four cases in which the tendon was wide and firm, but a high percentage of recurrences in cases of a weak or obliterated conjoined tendon, when the rectus muscle was not transplanted to cover the defect. Wölfler was the first to adopt transplantation of the rectus muscle, and he uses it in all cases, while Bloodgood finds it unnecessary, except in cases in which the conjoined tendon is weak or obliterated. Another matter, the importance of which was first pointed out by Bloodgood, is the size of the veins of the cord. A considerable percentage of recurrences in cases with enlarged veins lead to the adoption of excision in suitable cases. Great weakness of the muscles of the abdominal walls, aside from the conjoined tendon, may necessitate the use of the cremaster muscle in closure, as Halsted[4] has practiced successfully in many cases. Halsted states that since June, 1892, not a single recurrence has followed his numerous operations for the radical cure of hernia, and in all cases reported by Bloodgood the percentage of recurrences was a little over 6 per cent. The results from Wölfler's clinic are almost as good as this, only a little over 7 per cent. of recurrences being recorded. With the use of rubber gloves at the Johns Hopkins Hospital, the percentage of infections has been reduced to a fraction of 1 per cent., and Hilgenreiner reports similar improvement in Wölfler's clinic since the routine use of operating gloves was adopted. The method of operation, no doubt, has a decided influence on the success of the result, though probably any of the best modern methods in the hands of experienced and skillful operators will be followed by satisfactory results.

With the inconvenience and interference with physical exertion which comes from wearing a truss and the danger of strangulation, it would seem that those who are afflicted would be glad to take the slight risk which attends the modern operation. Even in old age and with serious affections of the heart or lungs, the operation need not be considered contraindicated, for these can be operated on under local anesthesia.

1. Beiträge zur klin. Chir., 1904, vol. xli, p. 373.
2. Archiv für klin. Chir., 1902, vol. lxviii, p. 1.
3. Johns Hopkins Hospital Reports, 1899, vol. vii.
4. Bulletin of the Johns Hopkins Hospital, 1903, vol. xiv, p. 208.

THE TREATMENT OF ULCER AND CANCER OF THE STOMACH.

The amount of recent literature on ulcer and cancer of the stomach indicates that the importance of these affections is being widely recognized. This is due not only to the frequency and ubiquity of these conditions, but also to the unsatisfactory results of the treatment hitherto in vogue. Rational medical treatment based on pathology and symptomology seems to have reached its full development. At any rate, there has been no marked recent progress, and the prospects are not encouraging. Internal medicine has confessed itself unable to diagnose cancer of the stomach in average cases early enough for satisfactory or even justifiable surgical intervention, and, therefore, regards this condition as hopeless. In the treatment of gastric ulcer, internists accomplish many immediate, but far fewer permanent cures, and are unable to prevent or control the frequent complications. On the other hand, surgery, having successfully relieved many conditions previously regarded as hopeless, is gradually finding a wider sphere of legitimate application.

In order to shorten the long periods of incapacity and distress in cases which do not respond readily to internal treatment, as well as to eliminate the serious dangers of immediate and remote complications, surgical treatment should be instituted. As it is almost equally important that this should be done while the patient's condition still permits an operation of choice, there is urgent need for the early recognition of the indications for radical measures. Bedside and postmortem observations alone are nearly as incapable of solving this problem as they were of settling the question of the treatment of acute abdominal affections. In these latter con-

ditions surgery amply demonstrated the necessity and wisdom of obtaining its working pathology in large part from the living body, for only in this way were sufficiently early diagnoses made possible. Similar progress is now being made in the diagnosis and treatment of gastric diseases, but in these affections the immediate operative results are insufficient for the determination of the best procedures. Careful and prolonged subsequent observations, obtainable only through the co-operation of the surgeon and the physician, are required to make the progress healthy and more rapid.

The outlook for better results from the radical treatment of cancer of the stomach is bright compared to the apparent hopelessness of other measures. Now that the mortality from pylorectomy is no longer prohibitive (15 per cent.), and there is a reasonable chance of cure (8 per cent. are said to go beyond the three-year limit without sign of recurrence), there should be less opposition to the operation.

The greatest obstacle to progress in the treatment of gastric carcinoma has always been the delayed diagnosis, and will always be so, as long as the present methods are retained. Exploratory laparotomy has never been given a fair trial as a means of early diagnosis, having been practically restricted to the determination of the eradicability of the lesion. A suitable incision can be made under local anesthesia with little discomfort, practically without danger, and causing only temporary disability, and it would seem that it should be resorted to when there is a reasonable suspicion of the existence of a carcinoma. Unquestionably the early recognition of cancer, particularly when grafted on an ulcer, would be extremely difficult, and consequently benign lesions might be excised. Still this would be a pardonable error, removing the commonest cancer-bearing area, just at the time and under the conditions of greatest danger.

In those cases in which a cure is not obtained, death usually results from metastases—seldom from local recurrence. Life is on the average longer than in the unexcised cases, and for a time, at least, there is mental and physical comfort. In the face of this evidence, it seems hardly justifiable to deny to any individual the possibility of a cure or the probability of a longer and comfortable life, when the horrors of the only alternative are only too well known.

LEPROSY.

While there is no good reason for doubting that leprosy is dependent on the activity of the bacillus isolated by Hansen, there is ground for believing that infection is favored by certain predisposing influences. It may be that more or less intimate contact is necessary for the transmission of the disease, but over and above this it seems not unlikely that the susceptibility may be in some way related to the general nutrition of the individual. That there is anything in the diet that specifically gives rise to leprosy is not commonly believed, but that some inadequacy in the food may be of importance in this connection is the view taken by Dr. W. D. Neish and Mr. T. J. Tonkin,[1] in the course of a communication dealing with the question of leprosy in Jamaica.

These observers point out that the leprous areas of the world coincide with those in which the diet of the inhabitants is characterized by a deficiency of nitrogen, and that the prevalence of the disease diminishes in proportion as this deficiency is supplied. Thus, in Jamaica, the number of lepers has diminished in the course of forty years from 800 to about 300, while the population has almost doubled—there being at present about four lepers to every 10,000 of the population. This diminution in morbidity is coincident with a gradual improvement in the native diet. In addition, the great improvement observed in cases of the disease when a liberal diet is provided is especially noteworthy. This is, in fact, considered a most important feature of the treatment, an ample supply of bread, milk, meat and peas being given in addition to the national foods.

One of the most successful measures in the treatment of the disease consists in the subcutaneous injection of mercuric chlorid, which was employed in about 100 specially selected cases. One-quarter grain each of mercuric chlorid and sodium chlorid, dissolved in 20 minims of distilled water, was injected twice weekly through a platinum or iridium needle deeply into the muscles of the back or the buttocks. The injection is painful, and is followed by considerable induration, the pain persisting for from two to four hours and the swelling for a week.

The treatment in general is roborant and hygienic. Cleanliness is insisted on, and patients are made to bathe at least twice weekly. Suitable literature is provided for those that can read, and games and sports for those able to indulge in outdoor exercise. Plays, readings and concerts are given in the evenings. There is a school for the children and work for the older patients. Segregation is not compulsory, except for pauper and vagrant lepers.

The prevailing note in the communication under consideration is one of conservative and healthy optimism. As will be seen, much can be done not only to prevent the disease by hygienic means, but also in the way of amelioration and cure in the individual case—naturally the more the earlier the disease comes under observation and is subjected to treatment.

WELTMER DOWNED AGAIN.

In our medicolegal department we have already noticed the decision of the Missouri Supreme Court against Weltmer and others for malpractice. It would appear from this that the court disregarded the plea of the healers that they were not physicians and that they were not treating patients under the ordinary rules. The court also ruled out their objection that the testimony of or-

1. Bristol Medico Chirurgical Journal, March, 1904, p. 1.

dinary physicians was not competent in their case. The decision was a sensible one, and all the more satisfactory since it dealt with a Missouri institution. It settled the question in that state as to the liability of self-styled magnetic healers in the care of disease. The state motto of Missouri is "Salus populi suprema lex esto," which a humorist liberally translated "the law shall not stand in the way of the safety of our people." The Missouri Supreme Court, on the other hand, takes the more rational view of the case. It believes in the protection of the people even against those who claim to heal only by the special power of mind. We hope that there will be more decisions of this kind.

THE REED MEMORIAL.

We are glad to learn that the Reed Memorial Association has been regularly incorporated. An appeal will soon be sent out to the public for a memorial fund to commemorate the splendid work of Major Reed and to aid in the support of his family. During the meeting of the American Medical Association at Atlantic City it is proposed by the committee appointed last year to bring the matter before the members so that they may show their sympathy in a practical way. When the profession has led the way, the public will surely follow.

THE MEDICAL PROGRESS OF TWENTY-FIVE YEARS.

Some interesting figures recently published[1] show the reduction in mortality for some of the more frequent diseases in the last twenty-five years. The mortality per one hundred thousand, in the cities of Germany having a population of over fifteen hundred, during the years 1877-81, is compared with that during the years 1897-01. Nearly all the diseases which we now know to be infectious show a marked decrease in their mortality rate. Without mentioning in detail all the diseases cited, some of the figures may be quoted as being of special interest. Thus, in the first period (1877-81), thirty-seven times as many people died of smallpox as did in the last period (1897-01). During the first period four times as many people died of typhoid fever, twice as many of puerperal sepsis, one and one-sixteenth as many of pulmonary tuberculosis, and over three times as many of diphtheria. The only class of infectious diseases which showed an actual increase in mortality were the acute intestinal diseases, aside from typhoid. The authors consider the decrease in mortality to be due to a variety of causes, of which the most important is the general improvement in the hygiene of cities; good water supply, good sewerage, wider streets, and regulation of tenement building. In individual diseases, other factors come into play, as the discovery of antitoxin in diphtheria. While these statistics refer to German cities, they can probably be applied with reasonable accuracy to American cities, though we are free to admit that the needed sanitary reforms in large cities are more slowly and perhaps less efficiently carried out in this country under present political conditions than they are in Germany under a paternal government.

1. Münchener med. Wochenschrift, li. No. 16.

THE RED CROSS SOCIETY.

The recent reorganization of the Red Cross Society of the United States greatly increases the prospects of its future usefulness. Notwithstanding the acknowledged merits of Miss Barton, her age and her dependence on others have made it probable that she was not a suitable head. It is a little unfortunate that she did not recognize this herself. The withdrawal of President Roosevelt as an indorser of the organization was a sharp reminder to the public of the condition of affairs and probably aided in the present movement. The new Red Cross Society will be, it is said, an institution backed by the Government and with arrangements for local state branches. The accounts of this society are to be audited by the auditor of the War Department and annual reports will be made to Congress. The business methods which have been so long criticised will be thoroughly revised. The usefulness of such a society in times of stress has been well shown in the present Russo-Japanese war, there being on both sides an efficient organization which is doing much to aid in the mitigation of some of the horrors of war. If our own country had been suddenly involved in hostilities with another power little dependence could have been placed in the Red Cross as it has existed for the past few years. We would have been obliged either to reconstruct it or to depend entirely on new resources. The present prospects are that we will in the future have a body capable of valuable service not only in times of war, but in the emergencies of peace to which we are, from the extent of our territory, etc., especially liable.

MEDICAL EQUIPMENT OF WARSHIPS.

The Russo-Japan war is likely to give us some additional points in regard to military medicine. The Japanese have shown themselves to be good scientific observers, and it will not be irrational to suppose that there are also equally competent ones in the Russian service. One rather important suggestive point has already been brought out by the report of Dr. H. D. Wilson of the gunboat *Vicksburg* in regard to the wounded in naval warfare. He was sent to aid in the care of the wounded of the *Variag* after her first engagement with the Japanese fleet and reports that notwithstanding the fact that the ships did not come into close contact and only the main batteries were used, the number of wounded on board that ship, well fitted as she was to care for the ordinary emergencies as it was supposed, proved her arrangements for medical and surgical care entirely inadequate for the occasion. He thinks the result of this engagement shows how impossible it is to attend to the wounded during an engagement between modern ships unless the number of medical attendants is tremendously increased. As at present arranged it would appear that the wounded will have to take entire care of themselves until the fight is over. In a fight lasting not over twenty-five minutes nearly one hundred men were disabled by wounds, and this in spite of the fact that the ships were from three to seven thousand yards apart and the minor batteries not employed. It is evident that under modern conditions naval warfare is not tending toward any great advance in the immediate care of the disabled in battle.

The attendance of hospital ships would seem to be an almost inevitable necessity to any fleet engagement. Their lack even in single ship engagements will be a misfortune.

THE NATURE AND TREATMENT OF SOME FORMS OF SLEEPLESSNESS.

The causes of sleeplessness are varied, but they must all be looked for in some irritative disturbance affecting the central nervous system. The disturbance often is cerebral, cardiac or gastrointestinal in origin, but at times its precise source may not be obvious. Sleep may be affected in several ways, somewhat in accordance with the disturbing influence. In the first place the patient may lie awake for hours and finally fall asleep, as is common in neurasthenics; or he may have no difficulty in falling asleep at once, but awakes early, as is often the case in the aged; or he may fall asleep readily and in a short while be awakened suddenly, usually with a sense of fear and slight oppression of the chest and almost always with palpitation of the heart—this is characteristic of cardiac disorder. Some interesting observations on this last variety are recorded by Dr. Leopold Feilchenfeld,[1] in whose opinion it is to be attributed to weakness of the heart muscle, with derangement of compensation. He has noted that sleep occurs most readily when the patient lies on the left side, but it is likewise terminated most rapidly under the same conditions. The apex beat is extended and displaced to the left, the pulse becomes small and frequent, and symptoms of dyspnea set in. It is probable that transitory dilatation of the heart takes place from interference with the circulation of uncertain character. Sometimes the symptoms develop when the patient occupies the dorsal decubitus. As to treatment, it is to be remembered that sleep may be prevented or interrupted at any stage in accordance with the presence of flatulence, pressure on the heart, cerebral congestion or excessive peristaltic activity. Relief will usually be afforded by free evacuation of the bowels and moderation in diet, especially in the last meal of the day. Insomnia is often a habit and, in cases of neurasthenia especially, the vicious circle must be broken up and sleep induced for several nights in succession. This end may be attained by the administration of small doses of some harmless hypnotic, as sulfonal and the like. Of sulfonal, for example, about four grains may be given two or three times in the course of the afternoon. He even recommends the use of morphin in very small doses to secure sleep at first, but this is an exceedingly dangerous suggestion. There is danger that the last end of the patient may be worse than the first. If the physician has a suitable patient under his complete control and is able to minimize the risk of the procedure, 1/25 grain of morphin hydrochlorate may be given in combination with small doses of digitalis, ¼ grain, given at night. Of course, in addition to the measures indicated other hygienic procedures should be instituted, including especially hydrotherapy.

1. Berliner klin. Wochenschrift, March 14, 1904, p. 282.

THE PRODUCTION OF ACID BY THE GROWTH OF PNEUMOCOCCI IN PNEUMONIC SERUM.

The closer study of the reactions of infection has revealed a number of significant phenomena, such as specific bacteriolysis, specific agglutination, specific precipitation. While pneumococci grow equally well in normal and in pneumonic serum, the growth in the latter is characterized by the formation of a voluminous sediment. Rosenow[1] shows that this sediment is due to a distinct precipitation, independent of agglutination of pneumococci, and not produced by rapid growth and death of the cocci. In trying to discover the real cause of this precipitation, Rosenow found that as pneumococci grow in pneumonic serum, there develops a marked acid reaction, whereas pneumococcal growth in normal serum does not change the reaction. The precipitate mentioned is evidently closely connected with the acid production, because it was found proportional to the degree of acidity; because no precipitate forms in heated serum (56 C.) when the reaction remains alkaline, as happens in some cases; because a similar precipitate develops when pneumococci are grown in normal serum, to which has been added some organic acid. Pneumococci also produce acids in the serum of some other febrile diseases, e. g., scarlet fever. In the serum of normal persons, however, they do not change the reaction, judging from Rosenow's large number of control experiments (28). He has made no effort as yet to determine the exact kinds of acids produced in pneumonic serum, except to make out that lactic acid is present. Of course, we are not yet in position to form any idea as to the exact significance of the presence of this acid-producing substance in pneumonic serum. Many interesting questions suggest themselves, as, for instance, whether acid is produced as the pneumococci grow in the lungs and in the blood during the course of pneumonia. It is said that late in fatal cases of pneumonia the blood shows a diminished alkalinity. Rosenow asks whether or not some of the toxic symptoms in pneumonia may not be the result of acid intoxication, and suggests that the favorable results obtained by some physicians from the use of alkalinizing agents might find their explanation along this line. It is as yet too early, however, to make any far-reaching inferences. Other and more diversified observations and experiments must be made first. Pneumonia presents so many complex problems and is a disease of so tremendous importance as few others at the present time, that every new addition to our knowledge in regard to it, especially when it opens up new avenues for investigation, is most desirable.

THE APPLICATION OF A NEW METHOD OF RESEARCH.

We have recently had occasion to refer to the progress in the study of protozoa that has been made by American pathologists within the past two years, which has been remarkable, and which will perhaps turn the attention of European scientists to the work of Americans more than any other one thing that the latter have recently done. Of these advances, however, there is

1. Journal of Infectious Diseases, 1904, I, p. 280.

none so fundamental as the successful cultivation in artificial media of pathogenic protozoa, first accomplished by Novy and McNeal of Ann Arbor. The greatest difficulty in the way of studying protozoan diseases has always been the impossibility of securing the organisms by themselves, free from other living cells, and in pure culture, so that they can be studied during the course of their growth and development, and particularly so that their ability to produce disease when freed from any other possible contamination can be demonstrated. Beginning with the common trypanosoma of rats, *Trypanosoma lewisi*, pure cultures were obtained that now have been carried through sixty-seven generations. Later cultures were obtained of the organisms found in nagana, the tsetse-fly disease of Zululand, and other observers have found the method successful for the cultivation of the trypanosome of mal de caderas, a disease of South America that affects horses. Novy and McNeal report in this number of THE JOURNAL the cultivation of still another organism, *Trypanosoma evansi*, the cause of the disease surra in the cattle of the Philippines. Therefore, four distinct organisms have now been isolated in cultures, but all are trypanosomes. It yet remains, with the knowledge gained from studies of these organisms, to isolate other protozoa in a similar way. One of the chief advantages obtained by cultural methods in the study of bacteria is the possibility of determining whether two diseases with certain similarities are the same or different, e. g., typhoid and paratyphoid. The cultivation of protozoa has progressed enough to permit of similar information being obtained concerning the protozoan diseases in certain instances. For example, there has been some contention as to whether surra is the same as nagana, and perhaps the same also as other of the horse and cattle diseases produced by trypanosomes. In this paper Novy and McNeal have succeeded in showing that the trypanosome of surra is distinctly different in its cultural characteristics from the trypanosome of nagana. The future development of cultivation of protozoa will be watched with most intense interest in view of our increasing acquaintance with tropical diseases, in which they are particularly concerned, not to mention their possible connection with other and more familiar diseases.

THE MEDICAL SAMPLE BUSINESS.

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NEW JERSEY.

Eminent Chemist Critically Ill.—Dr. Thomas B. Stillman, professor of chemistry at Stevens Institute, Hoboken, is dangerously ill with pneumonia.

Election.—At the annual meeting of the Burlington County Medical Society the following officers were elected: President, Dr. J. Howard Pugh, Burlington; vice-president, Dr. J. Boone Winterstein, Moorestown; secretary, Dr. George T. Tracy, Palmyra, and treasurer, Dr. Enoch Hollingshead, Pemberton.

Personal.—Drs. Maxson, Jersey City, and Norich, Lenoxville, have been appointed resident physicians at Mercer Hospital, Trenton.——Dr. John W. Bennett has been elected president of the Long Branch Board of Health.——Dr. Gordon K. Dickinson has been elected president of the Jersey City Board.——Dr. George F. Wilbur has been appointed a member of the Asbury Park Board of Health.

Examinations for Sanitary and Health Officers.—The Board of Health of the State of New Jersey announces that applicants for license to serve as sanitary inspector or health officer will be held at Trenton on the first Wednesday in June and in December. The subjects for examination will include the health laws of the state, preventable diseases, isolation and quarantine, disinfection, nuisances, collection and disposal of refuse, vital statistics, etc.

NEW YORK.

Physician's House Burned.—The residence of Dr. George D. Johnson, Oxford, was burned to the ground, May 16. The loss is partially covered by insurance.

Aftermath of Epidemic.—The common council of Watertown has appropriated $4,500 to be used by the board of health to pay expenses incurred during the recent epidemic of typhoid fever.

Reception Hospital for the Insane.—The Foley bill which provided for the establishment of a reception hospital for the insane on Manhattan Island, although opposed by Governor Odell on the ground that it was not wise to expend the $1,200,000 that was called for in the bill in making this improvement until the efficiency of such an institution had been demonstrated on less extravagant lines, was passed over the governor's veto. This hospital is actually a necessity, as in the past acutely insane patients have been kept in station houses for several days or in Bellevue Hospital until they could be transferred to state hospitals.

New York City.

Crippled Children Benefit.—The benefit for the proposed home for destitute and crippled children was a success, and increased the fund by $4,000.

Birthday Gift.—D. J. Crimmins, to mark his sixtieth birthday sent a check to St. John's Guild to defray the cost of the floating hospital this summer.

Examination.—A competitive civil service examination for the position of director of the pathological laboratories at Bellevue will be held June 7. The salary is $5,000, and it is understood that the director will be expected to give his entire time to the work.

Mosquito War.—The Health Commissioner, Dr. Darlington, has inspected the swamps of Staten Island, Northern Manhattan and the Bronx, and has taken steps to have the infested swamps filled in or drained. Crude petroleum is used in addition to drainage.

Conditional Gifts Secured.—By the donation of $40,000 by Edward R. Thomas to the Manhattan Eye, Ear and Throat Hospital, in memory of his father, General Samuel Thomas, conditional gifts of $125,000 are secured, and a new building is assured for the institution.

Meningitis on Increase.—The epidemic of cerebro-spinal meningitis has increased to an alarming extent. The department of health, in trying to fight the disease, has offered to place at the disposal of all hospitals and medical practitioners the services of its laboratories to aid in the diagnosis of the disease.

Personal.—Dr. Warren S. Bickham has been appointed instructor in surgery at the Post-Graduate College and Hospital. ——Dr. William K. Simpson has been appointed consulting otologist at the Presbyterian Hospital.——Dr. Leon L. Walters, assistant chemist of the Department of Public Charities, has resigned on account of ill health.

Hospital Cornerstone Laid.—The cornerstone of the new Woman's Hospital in West 110th Street, has been laid. The cornerstone of the old building at 49th Street and Park Avenue was used. The new structure will be six stories high, of steel and brick, with a frontage of 200 feet. When completed the cost will be more than $1,000,000.

Contagious Diseases.—There were reported to the Sanitary Bureau for the week ended May 14, 1904, 1,516 cases of measles, with 45 deaths; 389 cases of diphtheria, with 51 deaths; 363 cases of scarlet fever; 2 cases of smallpox; 113 cases of varicella; 426 cases of tuberculosis, and 172 deaths; 28 cases of typhoid fever, with 10 deaths; 97 deaths from cerebrospinal meningitis, and 242 deaths from pneumonia.

New Tuberculosis Clinic.—Since the opening of this clinic, March 1, until May 15, there were examined 794 patients; of this number 164 were found to be non-tuberculous. Bacterial examinations alone were not relied on in making diagnoses. As bearing on the social aspect in tuberculosis it was interesting to note that 55 patients out of the 68 who gave wrong addresses, were a menace to their families, friends and neighbors.

Unofficial Health Board News.—A notice has been posted in the health department building and in all the local health offices that, in the future, no information relative to the work of the department shall be given to the public, or to representatives of newspapers without the personal sanction of the health board. The commissioner has done this in order that information given out may be absolutely reliable. He said there would be no withholding of news.

PENNSYLVANIA.

Western Pennsylvania Commencement.—On May 27, a class of 51 was graduated from the Western Pennsylvania Medical College, Pittsburg.

Bequests.—By the will of Allen Fliteraft, of Media, the Chester Hospital will receive $1,000; the Friends Home, West Chester, $1,000, and the Friends Home, Woodstown, N. J., $1,000.

Marine-Hospital Transferred.—The secretary of war has formally transferred title to the old arsenal property at Pittsburg to the Treasury department for the purpose of constructing a marine hospital. This was provided for at the last congressional session, when $150,000 was appropriated for this purpose.

Autopsies for Fifteen Dollars.—The Board of County Commissioners, of Chester County, have issued an order directing that the regulation price of $15 be strictly observed as the cost for performing autopsies. The operating physicians formerly set their own prices, ranging from $30 to $40. The sum now stipulated by the commissioners specifies that $15 will be paid in all cases for internal examination, and $5 only for external examination.

Pennsylvania a Non-Registration State.—The eleventh annual meeting of the Associated Health Authorities and Sanitarians of Pennsylvania was held in Gettysburg, May 26 and 27. Dr. Cressy L. Wilbur, statistician of the United States Bureau, delivered an address on: "How Can Pennsylvania Secure Effective Registration of Mortality Statistics." Dr. Benjamin Lee, secretary of the State Board of Health, stated that Pennsylvania is one of the few old commonwealths in this country which is classed as a non-registration state.

Prevention of Tuberculosis.—At the recent annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis, the following officers were elected: President, Dr. Howard S. Anders, Philadelphia; vice-presidents, Drs. J. Solis Cohen, Philadelphia; Guy Hinsdale, Hot Springs, Va.; Benjamin Lee, Philadelphia; S. Adolph Knopf, New York City; Albert E. Roussel, Philadelphia; Lawrence F. Flick, Philadelphia; Samuel G. Dixon, William Moss, Philadelphia and Mazyck P. Ravenel, Philadelphia, and Messrs. Talcott Williams and Samuel Cartner; solicitor, James L. Stanton, Esq.; treasurer, the Commonwealth Title and Trust Company; secretary, Dr. Ward Brinton, Philadelphia, and directors, Drs. J. Solis Cohen, Lewis F. Flick, Guy Hinsdale, Howard S. Anders, Mazyck P. Ravenel, Albert E. Roussel, Leonard Pearson, Joseph Walsh, Samuel Scoville, Ward Brinton, George W. Norris, and Daniel J. McCarthy. The society voted that short articles on subjects pertaining to tuberculosis and its prevention be sent weekly to the lay press. A course of lectures on the same subject for the education of the people has also been planned.

Philadelphia.

Hospital Appointments.—The following have been elected resident physicians to the Polyclinic Hospital: Drs. James K. Hall, John D. Butzner, Edward D. Lovejoy, George E. Adams, and John Read.

Tablet to Dr. Stackhouse.—A tablet erected in memory of Dr. Susan Palmer Stackhouse by the alumni of the Women's Medical College, was unveiled May 19. Dr. Stackhouse was a member of the class of 1873, who died in 1888 and bequeathed a large sum of money for the establishment of a gymnasium in the college.

Personal.—Dr. Edward A. Mallon, who was operated on for appendicitis in Vienna, is rapidly improving. He has been in Vienna since October.——Dr. F. Savary Pearce, professor of neurology in the Medico-Chirurgical College, who has been ill for some time, is spending a recess with his parents in Steubenville, Ohio.

Women Graduate.—The commencement exercises of the Women's Medical College was held May 18, when 43 young women received degrees from Mrs. Mary E. Mumford, president of the board of corporation. Prof. Robert Ellis Thompson, S. T. D., president of the Central High School, delivered the address to the graduates.

New Medical Laboratories.—The new medical laboratories of the University, which have been under construction for four years, will be dedicated June 10. The buildings will cost, exclusive of the ground and equipment, about $700,000. Formal addresses will be made in the Laboratory of Pathological Histology by Prof. H. P. Bowditch, Harvard; Prof. R. H. Chittenden, Yale; Prof. George Dock, University of Michigan, and Prof. Horatio C. Wood, University of Pennsylvania.

Health Report.—All contagious diseases show a marked decrease this week, as compared with last week, the figures for typhoid fever, smallpox, scarlet fever and diphtheria being much less than for any similar period in several months. There were only 182 cases of typhoid fever reported, and 11 cases of smallpox. The death rate shows a marked decrease. There were 477 deaths recorded during the week, a decrease of 43 from those of last week, and an increase of 6 over the corresponding period of last year.

New Hospitals.—Plans are on foot for the erection of a new Rush Hospital at a cost of $100,000. This is to replace the present building. Fifty patients are at present under treatment in the institution, and more room is imperatively needed. ——Application is to be made on June 13 for a charter for a new hospital in Frankford, to be known as "The People's Hospital." A legacy of $20,000 has been left for the establishment of the hospital. An additional $3,000 has been collected by the ladies' auxiliary.

Bequests.—By the will of Maxwell Sommerville, the University Hospital received $10,000 for the endowment of a room. The same testator devises $1,000 to the Philadelphia Home for Incurables; $1,000 to the Home for Crippled Children, and $1,000 to the Home for the Training in Speech of Deaf Children.——In the adjudication of the estate of Leopold Bamberger, awards to charity were made as follows: Jewish Hospital, $5,000; Jewish Foster Home, $2,500; Orphans' Asylum, $1,000, and Society for the Prevention of Cruelty to Children, $1,000.

Faculty Reorganization.—A plan for the reorganization of the faculty of the Department of Medicine in the University of Pennsylvania has been approved by the Board of trustees, whereby the faculty membership has been extended to the clinical associated and assistant professors, to the associates and lecturers, and to a limited representation from the subordinate staff. The scheme provides for an executive body or council, to be composed of the heads of departments in fundamental subjects and two representatives of the specialties. The plan will be put into effect September 1.——Jefferson Medical College has adopted a similar plan, electing all the clinical professors to a full professorship. The first to be thus honored are Drs. Orville Horwitz, W. Joseph Hearn, H. Augustin Wilson and D. Braden Kyle.

GENERAL.

American Association of Life Insurance Examining Surgeons.—The annual meeting of this association will convene on the Steel Pier in Atlantic City, Monday, June 6. The morning session will begin at 10:30. There will be an afternoon session on the pier and an evening session at the Hotel Islesworth. The officers invite the members of the American Medical Association and others interested.

National Association for the Study and Prevention of Tuberculosis.—A meeting of those interested in the formation of this body is to be held in Atlantic City June 6, at 8 o'clock, in the public school building. The committee appointed for the purpose in Philadelphia March 28 has prepared a constitution and by-laws, which will be under consideration. The secretary of the association is Dr. Henry Barton Jacobs, 11 Mt. Vernon Place, West, Baltimore.

Reciprocity Convention.—The third annual meeting of the American Confederation of Reciprocating Examining and Licensing Medical Boards was held in Chicago, May 24. The examining or licensing boards of the states of Illinois, Indiana, Wisconsin, Michigan, Iowa, Nebraska, Kentucky and Maryland were represented. The address of the president, Dr. W. A. Spurgeon, Muncie, Ind., of the Indiana State Board of Medical Examination and Registration, dwelt on the insufficiency of the courses in the colleges and the lack of proper relation between the various branches. He advocated regulation of the medical college curricula and of state board questions as a basis for reciprocity and uniformity. A more detailed report will be given next week.

FOREIGN.

Yellow Fever in Mexico.—A case of yellow fever is reported in Valles, one in Tampico and one in Vera Cruz.

Plague in Formosa.—The island of Formosa has been subject to plague for five years, but during the month of March the mortality was unusually high; 558 cases are reported, with 369 deaths.

Medical Inspectors of Schools in Germany.—The city of Duisburg, with 110,000 inhabitants, has appointed 10 medical inspectors for its schools. Berlin has 36 inspectors to a population of about 1,980,000.

The Berlin Vacation Medical Courses.—The next course will commence September 26 and last until October 22, 1904. The course is in charge of the docents' union. Further particulars may be obtained from Dr. Melzer, Ziegelstrasse, 10-11, Berlin.

Poor Milk in England.—At the annual meeting of the Sanitary Inspectors' Association, Sir James Crichton-Browne declared that London has a very poor milk supply, and urged that the method and quality of the milk supply of London should be taken up by those responsible and greatly improved.

A new journal for research in physiology has been founded in France with the title *Archives Internationales de Physiologie*. The proprietors and editors are L. Frédéricq of Liège and P. Heger of Brussels, with a long list of collaborators which includes Kronecker, Pawlow, Dastre and J. N. Langley of Cambridge.

German Medicine in Japan.—Profs. E. Bälz and J. Scriba have been officially connected for several years with the Japanese medical school at Tokio. All the preparatory and medical courses are given in German. The present and former pupils of these two professors have had bronze busts made of them, which are to be installed in front of the new medical school building.

No Postage Charge for Serum Literature.—The official institute at Vienna, which is producing antidiphtheria antitoxin and the scarlet-fever serum, does not have to pay postage on communications connected therewith. Reports from physicians throughout the country in regard to the results obtained with the serum are also transmitted to the institute free of charge in the mails.

Plague in Peru.—The bubonic plague epidemic in Lima and Callao, Peru, appears to be under control. Thorough sanitary inspection has been carried out and many changes made in sanitary provisions. Cities are not built properly, and most of the cases of plague occur in closely settled tenements. The sewerage system is very deficient. All cases of plague have been removed to the lazaretto outside the city.

Morbidity of Physicians in Austria.—Some recently published statistics show that only 7 per cent. of the mortality among physicians in Vienna is due to tuberculosis. This is less than half the general average throughout the country. On the other hand, nearly 40 per cent. of the deaths are due to heart and kidney affections. It is also stated that 40 per cent. of all known morphin habitués are physicians.

Payment of Physician's Services.—The Berlin physicians are considering the adoption of a rule that all accounts for services rendered must be presented at once after the close of the treatment, and at most not later than three months afterward. Certificates and testimonials to private parties must be paid for on the spot, and also night visits or consultations on behalf of persons with whom the physician is not acquainted.

German Physicians Not Allowed to Send Student Substitutes.—The German authorities have issued an ordinance denouncing the practice of sending a medical student as the physician's representative. This practice they say not only shows a lack of consideration of the patient, but has a directly injurious effect on the standing and prestige of the profession. A physician so doing lays himself open to proceedings in a court of honor.

Anti-Alcohol Medical Congresses.—The Sixth Northern Anti-Alcohol Congress will be held at Copenhagen July 6 to 12, 1904. The eighth German congress of the same kind will be held at Cassel in September. The committee in charge has offered a prize of $75 for the best work on the action of alcohol on the warm-blooded heart. Competing articles should be sent before August 1 to Prof. Hans Meyer of Marburg, Rosemann of Bonn, or N. G. Keferstein of Lüneberg, with the name in a sealed envelope.

Naunyn's Resignation.—Naunyn retires this summer from further service as professor of pathologic anatomy, etc., and chief of the medical clinic at Strasburg. He is now in his 66th year. He was one of the founders of the *Archiv. f. exp. Pathologie und Pharmakologie* in 1872, and in 1896, with Mikuliez, founded the *Mitteilungen a. den Grenzgebieten* (Communications from the Borderland Between Medicine and Surgery). His most important published works have been on cholelithiasis and diabetes.

German Congress for Experimental Psychology.—The first congress of this kind convened recently at Giessen, April 18 to 22 with a comparatively large attendance of psychologists, psychiatrists, neurologists and teachers. The most important result of the congress was the founding of a society for experimental psychology with E. Müller of Göttingen for president.

and Schumann of Berlin secretary. The society will publish its communications in the *Archiv. f. die ges. Psychologie* and the *Archiv f. Psych. und Physiologie.* One of the chief aims of the society is to organize collective research on the various aspects of experimental psychology and its "borderlands."

Resolutions Adopted by the Second Latin-American Medical Congress.—Before adjourning, April 10, the congress voted to send a message of congratulation to Dr. O. Cruz, chief of the board of health at Rio Janeiro, for his successful campaign against yellow fever. Another message of congratulation was also voted Drs. Carroll and Agramonte for their work on yellow fever in collaboration with the late Dr. Reed. Resolutions were also adopted urging the appointment of a committee to study the medical geography of the different states, also the flora of the different countries for medicinal use, to report at the next congress, which will be held at Montevideo in two or three years. The creation of training schools for nurses and of veterinary schools was also urged. Three resolutions were devoted to penology, one asking that the execution of the penalty should be suspended in case of insanity or intercurrent disease until the criminal has recovered during detention in some hospital or other safe place. The period of insanity or other affection shall be computable to the duration of the sentence. A further resolution also urged the establishment of small prisons at various points rather than a large central prison. By this means the convicts would remain in their home climate, under influences to which their health is accustomed. The formation of some Latin-American center for the study of tropical diseases was the last resolution adopted. See page 1440.

LONDON LETTER.

Physical Education in Elementary Schools.

In 1903 the government appointed a committee to examine the course of exercises in use in schools with a view to its improvement. A report has just been issued condemning the course exercises as not constructed on well defined principles. Much of it consisted of military drill, which the committee has now replaced by exercises which are intended to build up the physique. They number 109, and are divided into sets, the two preliminary being class arrangements (drill) and elementary starting positions; then follow arm flexions and extensions, balance exercises, shoulder exercises, head and trunk exercises, marching, jumping and breathing exercises. Although two or three set lessons a week are recommended stress is laid on the practice of some of the exercises for a few minutes during each school lesson. Exercises for all parts of the body are provided. The deformities prevalent among children which are liable to be intensified by school life are specially provided for by exercises to correct faulty posture. Such as raising the heels to correct the tendency to flatfoot and bending the head and the trunk backward to counteract the effects of the stooping posture often acquired by working at desks. Great stress is laid on correct breathing. While no fixed course of physical training for infants is recommended, breathing exercises from the earliest period of school life are insisted on, the formation of habits of correct nasal breathing being regarded as of great importance.

The Nomenclature of Death Certification.

With the advance of knowledge there is a constantly changing classification of disease with which the registrar-general makes praiseworthy attempts from time to time to grapple. He has just distributed copies of a new list of diseases causing death, and in the accompanying notes he expresses the hope that in future medical practitioners will assist the work of registration and compilation of statistics by abandoning as far as possible such obsolete terms as convulsions, scrofula, and phlegmon, which are given in the list, to say nothing of such vague words as consumption or decline, which are only popular terms. In certifying death from smallpox the physician is asked to state carefully the patient's condition with respect to vaccination. Puerperal fever is to be described as pyemia, septicemia, or septic intoxication of puerperal origin. Three forms of pneumonia are recognized and are included under general diseases. The epidemic form of cerebrospinal meningitis is to be distinguished as cerebrospinal fever. The exciting cause of peritonitis is to be given. The medical officers of asylums, in certifying the cause of death of lunatics are asked to state particulars of the brain disease for which the patient was under treatment, in addition to the disease which caused death. The obvious criticism of many of these suggestions is that they are "counsels of perfection." In the absence of a necropsy, which is seldom possible in private practice, the answer to many of these questions is impossible.

A Traveling Ophthalmic Hospital in Egypt.

At the beginning of 1903 Sir Ernest Cassel, the well known philanthropist placed at the disposal of the Egyptian government $200,000, to be used for the benefit of sufferers from diseases of the eye, which are so prevalent in Egypt. One of the objects was to train native physicians in the treatment of these diseases, according to modern methods. The Egyptian Sanitary Department decided to establish a traveling ophthalmic hospital so that patients would not have to make long journeys to obtain treatment. Mr. A. F. McCall, who has held various offices at the London Ophthalmic Hospital, was appointed to organize and direct the enterprise. The hospital was recently near the town of Menouf in the west of the Nile Delta. It consisted of eight Indian tents and kitchen of sun-dried bricks. The largest tent was used for operations of which on an average six were performed daily, about five-sixths of the total were for entropium (trichiasis). There were two tents for the accommodation of in-patients, only the most severe cases, especially those requiring intraocular treatment operations, being admitted. In another tent out-patients were treated by Mr. MacCallan's Arab assistant, who was trained in Cairo. Including this assistant the staff of nurses and servants consisted of 10 persons. The hospital had gained the confidence of the natives, who came in large numbers.

Radioactivity of Brine Baths.

It is often stated that natural mineral waters have properties which do not exist in mixtures produced by combining their various constituents. Some explanation of this hitherto unexplained fact is furnished by researches made in connection with the celebrated Droitwich baths of Worcestershire. These are brine baths, and the most saline in the country. Mr. F. Soddy of University College, London, has found that the gas given off by water is distinctly radioactive. Possibly radioactivity is an important factor in balneo-therapeutics, and is the cause of benefit being derived from one spa when it is not from another apparently equally suitable.

King Edward VIIth's Hospital.

An institution which will prove most valuable to the officers of both services, when suffering from serious disease or requiring the performance of an important operation, has been opened in London. It owes its existence to the benevolence of Miss Agnes de Keyser, whose services to the officers invalided from South Africa are well known. A private nursing home for officers in London was urgently required. This one will form a sort of London branch to Osborne House in the Isle of Wight (recently presented for the purpose by the king, and formerly a royal palace). Miss de Keyser, who is believed to be a large contributor to the expenses, will manage the hospital.

Endowment of a Lectureship at the Royal College of Physicians.

Dr. George Oliver, a fellow of the Royal College of Physicians, has presented to the college the sum of $10,000 in trust for the endowment of a lectureship or prize to be called the Oliver-Sharpey Lectureship or Prize, in memory of the late William Sharpey, F.R.S., professor of physiology in University College, London. His purpose is to encourage the application of physiologic knowledge to the prevention and cure of disease and the prolongation of life. One or two lectures will be delivered annually at the college or a prize awarded for work done.

The Weber-Parkes Prize.

Drs. T. H. Green, E. Seaton, and Wethered have been appointed adjudicators of the Weber-Parkes prize and medals for 1906, and have selected as the subject of the essay for that occasion: "The degree of infectivity of pulmonary tuberculosis and the administrative measures desirable for the control and treatment of the disease." This prize, of the value of $750, and a silver medal, is awarded triennially to the writer of the best essay on some subject connected with the etiology, prevention, pathology, or treatment of tuberculosis, especially with reference to pulmonary consumption in man. It is open to members of the medical profession in all countries.

Plague in South Africa.

From April 23 to May 2, 14 fresh cases of plague were notified in the Transvaal, 11 in colored persons and 3 in white. The total number of cases now numbers 142,123 in colored persons, and 19 in white. Since April 23 5 deaths have been reported, all in colored persons. For the week ending May 7, 11 fresh cases were reported, 5 in colored and 6 in white persons, and 4 deaths, 1 of a white and 3 of colored persons. In Cape Colony for the week ending April 16 only one case of plague was re-

ported, namely, a colored man at Port Elizabeth. Plague infected rodents were also found in the town.

Metropolitan Street Ambulance Association.

The very defective ambulance service of London has led to the formation of this association by the physicians of the metropolis, with the object of improving the situation. About 1,000 have joined the association. At the last meeting it was resolved to urge the need of an organization under one body of an improved ambulance service, summonable by telephone and provided with more rapid transit. As a result a very influential deputation consisting of the president of the association, Mr. Reginald Harrison, and many of the leading physicians and surgeons of London waited on the London County Council. It was suggested to combine the ambulance service with the fire brigade and by adding to the latter sufficient men and horses to provide for the 15,000 casualties which yearly require removal to hospital.

PARIS LETTER.

The Recent Epidemic of Typhoid Fever in Paris.

During the month of March there has been an epidemic of typhoid fever in Paris. The cases were seen more specially in certain parts of the capital, the 16th, 17th and 18th arrondissements, and also parts of the 13th and 14th. The source of infection seems to have been a case of typhoid fever, which took place on the borders of Normandy, in the watershed which furnishes water to the Avre, a small river, which is a source of supply for the capital. This case was only discovered by the medical inspector of the region after two weeks' duration, and the dejecta, which had been thrown on a dung heap, had not been sterilized. Two or three weeks after cases of typhoid fever began to appear in Paris, and instead of the average of 40 or 50 cases a week with a few deaths, the official statistics showed as many as 150 or 170 cases. There were 22 cases in one street, 2 deaths taking place the same day. There was a good deal of commotion, and the *Matin*, a daily paper of the yellow type, made a good deal of capital out of it, printing editorials in which the chief of the hygiene bureau, Dr. Monod, Bechmann and Martin, the heads of the water-supply department, were most virulently attacked. The epidemic was of short duration, the Avre water being cut off for a time, and the statistics are now about normal. Thanks to the publicity given to this by the *Matin* and other papers, the water used by the population was boiled. One characteristic of this epidemic was the tendency to relapses, which seemed more frequent than usual. It is well to state here that most cases of typhoid fever seen among Americans in Paris are of exotic origin, and come on after traveling through Italy or the provinces. Certain towns in Normandy and Brittany have been subject to epidemics of this nature, such as Dinard and Trouville, though at present there is no report of such a condition in such parts of France. The Paris water supply is furnished from several springs or small rivers, and twenty years ago, when the supply was not as large, it was now and then found necessary to draw on the Seine. This river was even tapped below Paris, a most detestable proceeding, and which caused so much commotion that it was found necessary to discontinue this practice. Each time that the unfiltered Seine water was put on, there was an epidemic of typhoid fever in the parts of the city where this water was used. It must be said that the number of cases of typhoid fever is steadily diminishing, and one no longer sees in the hospitals the rapidly fatal cases which were so prevalent fifteen years ago. The latter were more often found among foreigners, Swiss or German servant girls, who had recently come to Paris, and were subjected to a severe strain through nostalgia and various other causes of depression.

Cancer of the Breast Treated by Ovariotomy.

At a meeting of the Society of Surgery Dr. Guinard presented a woman 45 years old who had a cancer of the breast and a large fibroid of the uterus, which was rapidly increasing in size. Dr. Guinard removed the uterus as well as the ovaries, and shortly after the operation the glands of the axilla disappeared and the tumor of the breast diminished in size. After three months the tumor has well-nigh completely disappeared, though an examination of a small portion of the tumor shows that it is a fibrous carcinoma. It seems that music can alleviate the sufferings of women during parturition, and the *Presse Médicale* reports that Count Patrossof, director of the Public Assistance in Russia, has had an organ placed in the St. Petersburg Maternity. Whenever a woman begins to feel the first pains of childbirth, one of the nurses turns a crank, which grinds out a tune on the organ. In such conditions the birth of the child takes place without causing much pain to the assistants, the paper adds humorously.

Professor Pinard's Statistics.

It is rather interesting to note the statistics obtained in the obstetric clinic of Professor Pinard, which contains 57 beds. Since 1890, 31,539 births have taken place in this service, and out of this number 2,580 required an intervention. There were 167 deaths, which makes a mortality of 0.53 per cent. Out of these 167 cases, 71 were due to septicemia, or 0.22 per cent. In the gynecologic section 631 operations were performed, with 35 deaths. In his service of Lariboisiere from 1882 to 1889, Professor Pinard had 12,580 cases of parturition, with 94 deaths, or 0.74 per cent., and 0.39 per cent. mortality.

Marfan's Diphtheria Statistics.

Drs. Marfan and Menard have recently published the statistics of diphtheria at the Special Pavilion of the Hospital for Sick Children in Paris. From May 1, 1902, to May 1, 1903, 1,142 children were treated, and the mortality was 15.8 per cent. By suppressing all cases where death took place within the first twenty-four hours, the mortality is reduced to 11.8 per cent., and to 9.3 per cent. if all the cases within the first twenty-four hours are suppressed. Prophylactic injections were made to 1,000 brothers anad sisters of the patients, 5 c.c. being injected. Only 2 had diphtheria, one twenty-four days and the other four days after the preventive inoculation. Diphtheria has shown itself less malignant during this period, though croup has been more prevalent. Cases of measles and croup were treated by intubation, with good results. Local treatment was very much reduced, and only employed in the gangrenous forms.

DUBLIN LETTER.

State Registration of Nurses.

There is much excitement in the nursing and hospital world over the question of the state registration of nurses. We have mentioned the provisions of the bill now before parliament. Many hospital matrons and chairmen of hospitals are opposed to any state registration, since they believe that examination is not at all a fit means of judging of a nurse's qualifications. Much more important than any quantity of knowledge are those qualities, real though incalculable, of tact, temper, character, of which a state examining board can take no account. The truth seems to be that state registration is almost necessary if the profession or calling is to maintain its dignity. It will, however, have a general leveling effect, and will injure the hospitals which at present enjoy greatest prestige, while giving undue advantage to the less important training schools, for the public are not likely to distinguish carefully as to the place of education of a nurse whose qualifications have received state recognition. The Irish Nurse's Association held an important meeting in Dublin last week in support of the present bill, and many of the most influential medical men in Dublin were present and took part.

Irish Poor-Law Service.

An important contribution to the literature of the Irish poor-law grievances has just been made by Surgeon-General Evatt, C. B., a special commissioner appointed by the British Medical Association to investigate the subject and report on it. He was quite a stranger to Ireland and Irish ways of life and thought, so that his treatment of the subject comes to us with a freshness and impartiality which render his report very valuable. He spent several months in traveling through every district of Ireland, and he gives a truthful and life-like picture of the ordinary routine of Irish dispensary work. He fairly apportions blame where it is due, and he shows clearly the deleterious effect on the character of the medical officers of the conditions under which they have to work. At the same time he records in the most cordial terms his high opinion of the rank and file of the poor-law medical officers:

> I have seen their devoted services and driven with them in the storm and the rain round the battlefield of their splendid struggle against disease and insanitation.
>
> I have learned to respect them deeply, and I can never forget their many grievances, their splendid devotion to Ireland, their humanity, their broad views in the land of narrow views. The medical profession in Ireland contains the most level headed, the least bitter in religious animosities, and the most just-minded men in the land, and with just treatment they must come to the front. The struggle will be long and trying, but they must never despair, and as the years go on victory will surely come if they stand up as they do for humanity, progress and all that means betterment for the Irish people.

His statement of facts and observations is more valuable than his suggestion of the means of reform. The latter is, indeed, by no means original, and is already discredited. It is that instead of having individual medical officers under the control of local elective boards, the whole poor-law medical service should be unified into one central government system.

The difficulties in the details of arrangement are enormous; but, even leaving them out of account, the plan will never be popular. Whatever distrust medical men in Ireland may feel for local elective bodies, they are not likely to look with greater favor on a government department.

Sudden Deaths.

During the last few weeks we have lost two of the best-known Dublin surgeons with alarming suddenness—Sir Philip Smyly of the Meath Hospital and Doctor Austin Meldon of Jervis Street Hospital. In each case, while perfectly well sitting down to dinner, a stroke of apoplexy intervened, and death followed almost immediately. They lived within a few doors of each other, and it is curious to reflect that another neighbor, himself a great surgeon, Mr. Henry Croly, died with equal suddenness six months ago. Both Sir Philip Smyly and Dr. Meldon were in possession of large practices, and enjoyed the respect of their colleagues and the public. Their contributions to the literature of surgery, at any rate in recent years, were not numerous.

Correspondence.

So-Called Synthetics and Ethical Nostrums.

NEW YORK CITY, May 1, 1904.

To the Editor:—In THE JOURNAL, April 28, there appears a letter from Dr. Summers of the Organic Chemical Company, formerly the Liberty Chemical Company. The letter hardly requires an answer. Still a few remarks may help to throw some light on the entire patent nostrum controversy. Dr. Summers asks the question: If his thermol is nothing but impure acetphenetidin, how did he obtain a patent on it? Dr. Summers did not obtain a patent on thermol. He obtained a patent on acet-salicyl-phenetidin; in the patent the word thermol is not mentioned. The company tries to give the impression that thermol is acet-salicyl-phenetidin, but it will be noticed that on the thermol boxes the name acet-salicyl-phenetidin does not appear, and as a matter of fact the product for which a patent was obtaned and thermol are two different substances! I present one proof which can not be disputed, which Dr. Summers himself admitted, and which he was unable to explain. The melting point of a substance is as much its integral characteristic as any chemical test. In organic substances the melting point is frequently the most important test of identity. The substance for which a patent was obtained by Dr. Summers melts at 92 C. (at least so it is claimed in the patent, No. 706355). The substance sold as thermol melts anywhere at from 128 to 134 C. (thus by the way showing that it is not of uniform composition), while, when purified and recrystallized, it melts at 135 C., namely, the melting point of phenacetin! And as to salicylic acid, some samples show the presence of free salicylic acid, while in others it can not be demonstrated at all, neither in the free state nor in combination. That is, it can not be split up by any known chemical tests, thus showing the absence of the acid. I have four samples of thermol, and each one presents a different color, different crystalline structure and different melting point.

Now about iodomuth. If the iodin in the iodomuth is so firmly bound to the molecule that it can not be demonstrated by ordinary chemical reagents, then it is worthless therapeutically, because the action of such substances depends on the ready liberation of iodin and its action *in statu nascendi*. Take airol, for instance, which is bismuth iodosubgalate. In that product the presence of iodin can be instantly demonstrated.

In the preparation, urasol, Dr. Summers shirks the issue altogether. They claimed that it contained anacetyl radical. I showed that it did not. Did Dr. Summers try to controvert my statement? No. not at all. He only asks: What is the impurity? Here it is not merely a question of impurity. The entire claimed composition is in doubt. (I might add that in the original paper, as read at New Orleans, each product was named both by its chemical and its trade name.)

It is not necessary to reply to Dr. Summers' accusation of partisanship, though I may be compelled by circumstances to go into that matter fully. The origin of a preparation makes absolutely no difference to me. Among the preparations mentioned in my article there are several of foreign manufacture. So, for instance, dymal, montanin, remarol, horit, musol, lazon, katharol, parietin, rachitol, etc., are all of German manufacture.

My analyses are so perfect, my statements are so incontrovertible, that the only thing my detractors can do is to question my motives. But you can not fool all the people all the time, and the medical profession is slowly but gradually beginning to discern between the legitimate manufacturers of medical preparations and the fakirs. WM. J. ROBINSON.

Medicine in Colorado—An Overcrowded Field.

PUEBLO, COL., May 16, 1904.

To the Editor:—So far as medicine is concerned, the cry of "Go west, young man," has changed in Colorado to "Go east." No state in the Union and no country in the world is so well supplied with physicians as Colorado. Hundreds of medical men have sought the mountain air of Colorado on account of their own health or the health of some one belonging to them. This has produced just one result—an overstocked market of physicians, good, bad and indifferent. Denver has a population of 133,859, but has almost 600 physicians. Colorado Springs has about one physician to every 200 of population. In Pueblo the same condition of affairs prevails, with this exception—which has lured many a young doctor to stop in Pueblo long enough to spend all his capital before he realized why practice was not coming his way. Pueblo has a population of about 66,000, but of this number 10,000 are Mexicans who mean little or nothing to physicians. Then, owing to the location of large steel plants and smelters and manufacturing industries, 28,000 more of the population are under contract physicians. The largest hospital in the city is a contract hospital belonging to the Fuel and Iron Company. Notwithstanding this, there are no less than 33 men who make a specialty of fitting glasses to the eyes.

Among the mountain towns proper the same contract medical work is the rule. This condition of affairs is not generally known until men have spent their railroad fare and gone to Colorado to find it out for themselves. Added to this is the fact that the state itself is a health resort. Apart from those who come to Colorado on account of lung trouble there is not the same amount of sickness found at lower altitude. This means that the same proportion of physicians is not required.

This letter is not meant to deter men who need to change climate from trying Colorado, but being in a position to see almost every week some physician, old or young, stranded, after an honest trial to gain a practice in Colorado, it seems that a fair statement of the existing conditions ought to be made. Young graduates are sent out every spring with eloquent commencement orations ringing in their ears that there is room at the top, but I can point to-day to a dozen men who have prepared themselves with the best training possible, men who have taken full collegiate courses before entering their medical schools, who have followed their medical course with one or two years' hospital training, and this, with another term in Europe, and yet out in Colorado are making a bare living. For themselves or families they have been obliged to make a change to mountain air. It is not uncommon to find in Colorado physicians who, back east in established practices, were making ten and twelve thousand dollars a year, come to Colorado for the health of wife or daughter, and be able to pick up only a practice of a thousand or twelve hundred a year. But this is done cheerfully for the sake of those they love. And it should be for health, not wealth, that physicians seek Colorado.

JOHN INGLIS.

The Hospital Maintenance Problem.

MUNCIE, IND., May 21, 1904.

To the Editor:—In your editorial, "The Hospital Maintenance Problem," you speak of the difficulties of caring for deficits constantly coming up, and of the fact that the remedy is not clear. It seems to me that the state of Indiana has the plan that will eventually solve the problem.

It was my good fortune to evolve the plan out of which, with the assistance of friends in the legislature, there came a law that makes ample provisions for the care of all who are on the pauper list and who must be cared for at the expense of the public. The law provides that the commissioners of the various counties may, alone or in conjunction with hospital associations, erect and maintain hospitals; that they may accept donations, organize auxiliary associations, permit lodges to furnish rooms, etc., and to donate for their care; that they may make ample provision for the care of pay patients at the usual fees; that training schools may be run in connection with the institutions; that charity patients may be sent to the institution by the township trustee, who, in the state of Indiana, is the guardian of the poor; and that the care of these shall be furnished at the actual expense of the work.

The law further provides that after all moneys, derived from all sources, including profit from pay patients, donations, etc., is expended the county commissioners shall pay the deficit from the county treasury. No one connected with a hospital as a member of any board of managers can derive any financial profit from the institution, and the entire plan is that the work shall be done in a business way as a matter of charity, and at the actual sworn expense of the same.

Copies of this law can probably be had from the Board of State Charities, as it is classed under the charity laws of the state. I believe it is destined to solve this much-discussed problem of caring for hospital expenses.

GEORGE R. GREEN, M.D.

The Typhoid Mortality of Savannah.

BALTIMORE, May 21, 1904.

To the Editor:—Will you kindly give me space to correct an error in my article on "Typhoid Fever" in THE JOURNAL, Jan. 9, 1904? In classifying more than 3,000 American cities with reference to population and typhoid mortality, I have assigned far too high a mortality to Savannah. The error arose by losing the line of figures in the census reports and taking as the mortality of Savannah the figures one step to the right of Savannah's place. The error changes the average for the 45 cities in Savannah's group nearly ten points. It does not alter the evidence that typhoid fever mortality in cities has a generally inverse ratio to population, but the mistake gives Savannah a bad eminence, which it by no means deserved. So far from deserving the distinction of the highest typhoid rate, Savannah is, in fact, conspicuous among cities of the class by reason of a low typhoid mortality.

JOHN S. FULTON.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

POSTMORTEM ON A DEAD BODY.

PHILDADELPHIA, May 19, 1904.

To the Editor —Many thanks for calling my attention in the April 9 number of THE JOURNAL to a typographic error in my dictionary. The omission of a semicolon causes the apparent tautology. The line should read: "AUTOPSY. Postmortem; examination of a dead body."

W. A. NEWMAN DORLAND.

NORMAL SALT SOLUTION IN HYPODERMIC MEDICATION.

LOUISVILLE, KY., May 16, 1904.

To the Editor —Can the various forms of hypodermic medication be given using normal salt solution for the solvent? If there are any exceptions what are they?

HENRY SKELLER.

ANSWER.—Considering that the agents used hypodermically are as a rule of great potency and are therefore employed in comparatively weak solutions, the amount of sodium chlorid in normal salt solution—6 per mille—would not cause any reaction except with some synthetics of rare occurrence. Solutions of some of the alkaloid sulphates may on standing show separation, which, however, would be prevented by using the respective hydrochlorids of the opium alkaloids, the tropins, quinin, strychnin, cocain, etc. In fact, the cocain solution for local anesthesia known as Schleich's is a solution of cocain hydrochlorid 0.1, morphin hydrochlorid 0.025, sodium chlorid 0.2, sterile water 100 c.c., preserved by the addition of two drops of phenol. Schleich found that injection of pure water caused pain, whereas the normal salt solution was painless, but produced no analgesia. On the other hand, a salt solution one-third the strength of the normal solution—two per mille (0.02)—produced but little pain and was slightly analgesic. Referring to the subject of "Hypodermatic Medication," in the Reference Handbook of the Medical Sciences, the following paragraph is found: "Distilled water is not essential in making the solutions; indeed, it is inferior to river, cistern or well water, either of which will answer every requirement, if only free from visible impurities." No caution is added as to the necessity for sterilization. That water may be used for hypodermic use as long as it is free from visible impurities is a statement that should not go unchallenged.

COST OF POST-GRADUATE WORK IN VIENNA.

To the Editor:—Please state: 1. The minimum expense, which includes railroad fare from Chicago, steamship fare, clinic fees, board and other necessary incidentals, of a six months' course at the Vienna clinics. 2. Can much benefit be derived by one with little or no knowledge of the German language? 3. What is the best time of the year to spend this time there? 4. Please state any other useful or necessary information or references.

QUIZZICAL DOCTOR.

ANSWER.—1. A categorical answer is very difficult. One could get along on $400, but this might be unpleasantly economical. Better say $500. The transportation from Chicago to Vienna is about, third class, $50, and first class $100; returning, a little more. This includes railroad and steamship fare. Clinic fees are very little, but fees to instructors—private docent—may cost $15 or $20 for each three-weeks' course. Board can be had at $6 per week. 2. Yes. 3. October to March to see the most famous men and May to September for practical work under the assistants at the clinics. The latter have control of matters while the chiefs are away on their vacations. 4. Write to Dr. F. G. Harris, 8 Schlosselgasse No. 2, secretary Anglo-American Medical Association, Vienna. (See THE JOURNAL, April 16, 1904, page 1035.)

PRIVILEGED COMMUNICATION.

BRISTOL, N. H., May 16, 1904.

To the Editor:—In a divorce suit brought by the husband for adultery, has the court a right to compel the physician to disclose his treatment of the wife and for what diseases, this being done to prove the source of gonorrheal infection of the husband?

J. W. C.

ANSWER.—The states and territories that have passed laws extending the privilege to professional communications between physicians and patients were, in 1900, Arizona, Arkansas, California, Colorado, Idaho, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Utah, Washington, Wisconsin and Wyoming. Possibly others may have passed laws within three or four years. In the states named the physician could not be compelled to testify, and in most he would not be permitted to do so.

CHARITABLE INSTITUTIONS FOR INEBRIATES.

BUTLER, PA., May 23, 1904.

To the Editor:—Can you inform me of some good, reliable sanatorium or hospital for the care of alcoholic and opium cases, one in which a patient of very poor circumstances can be accommodated? Is there such a charitable institution in existence in this country?

DR. R. L. STACKPOLE.

Marriages.

BERTRAM F. ALDEN, M.D., to Miss Leonie Gless, both of San Francisco, May 11.

DAVID W. REID, M.D., to Miss Harriette Swigart, both of Iola, Kan., May 11.

WILLIAM O. SHELLER, M.D., Big Rock, Ill., to Miss Emma Frost of Chicago, May 13.

VIRGIL HAMMER, M.D., Luray, Va., to Miss Angie Pearl Bradley, at Luray, May 10.

STANDISH MCCLEARY, M.D., Baltimore, to Miss Rose Ida Duker at Baltimore, May 12.

LLEWELLYN P. BARBOUR, M.D., Boulder, Colo., to Mrs. Young Scott, at Athens, Ill., May 17.

CHARLES MINOR COOPER, M.D., San Francisco, to Miss Ella R. Goodall of Oakland, Cal., May 11.

JAY LEE BEEBE, M.D., Lower Lake, Cal., to Miss H. Eva Poapst, at Anaheim, Cal., May 18.

LYSTON D. HOWE, M.D., Leonore, Ill., to Miss Laura Quinn, in Eagle Township, near Streator, Ill., May 11.

EDGAR MORRISON, M.D., to Miss Josephine Brown, both of Jackson, Mich., at Ann Arbor, Mich., May 11.

Deaths.

John Milton Duff, M.D. Jefferson Medical College, Philadelphia, 1874, a member of the American Medical Association and chairman of the Section on Obstetrics and Diseases of Women in 1894; member of the Medical Society of the State of Pennsylvania, the American Academy of Medicine, American Association of Obstetricians and Gynecologists, and many other medical societies; chief obstetrician and abdominal surgeon to the Rhineman Hospital, chief surgeon to the Southside Hospital, gynecologist to the Kaufman Clinic; professor of obstetrics and associate professor of the diseases of women in the Western Pennsylvania Medical College, widely known as a lecturer, teacher, writer, diagnostician and operator, died from malignant disease of the mouth and throat, for which operation was twice unsuccessfully performed, after a protracted illness, May 14, at his home in Pittsburg, aged 54.

James Grey Thomas, M.D. University of Pennsylvania, Philadelphia, 1856, a councilor of the Medical Association of the State of Alabama, and for several years president of the Mobile Medical Society; a surgeon in the Confederate service during the Civil War, prominent as a physician and surgeon throughout the south, and a member of the staff of the governor of Alabama, died at his home in Mobile, May 13, from inflammatory rheumatism, after an illness of six weeks, aged 69.

William H. McGee, M.D. Bellevue Hospital Medical College, New York City, 1872, a member of the Medical Society of New Jersey, and the Warren County Medical Society; ex-president of the latter, and for eighteen years its treasurer; surgeon for the Pennsylvania Railroad for sixteen years, died at his home in Belvidere, N. J., May 10, after an illness of more than three years, of chronic interstitial nephritis and cancer of the stomach, aged 56.

William A. McCoy, M.D. Medical College of Indiana, Indianapolis, 1872, a member of the American Medical Association, and secretary of the Jefferson County Medical Society, died at his home in Madison, Ind., May 8, from heart disease, after a prolonged illness, aged 60.

John Adams Carrol, M.D. Medical Department of Victoria College, Toronto, 1869, who retired from active practice in 1884 and thenceforth devoted himself to the study of the flora of the Niagara peninsula, died at his home in St. Catharines, Ont., March 25, aged 58.

Peter F. Stokes, M.D. Medical College of the State of South Carolina, Charleston, 1846, a member of the South Carolina legislature in 1852, and of the secession convention in 1860, died at his home near Branchville, S. C., May 16, after a long illness, aged 83.

A. Nash Johnston, M.D. Medical College of Virginia, Richmond, 1873, superintendent of schools of Rockbridge County, formerly state senator, died at his home near Natural Bridge, Va., May 10, from pneumonia, after a short illness, aged 55.

Rial Strickland, M.D. Albany (N. Y.) Medical College, 1839, once member of the Massachusetts House of Representatives, and thrice state senator in Connecticut, died at his home in Enfield, Conn., Dec. 5, 1903, from senile debility, aged 88.

Albert Nassau Cooper, M.D. College of Physicians and Surgeons of San Francisco, 1901, a member of the American Medical Association, died at his home in Bisbee, Ariz., April 27, from pneumonia, after an illness of seven days, aged 25.

Herbert Lindermann, M.D. Medico-Chirurgical College of Philadelphia, 1891, was found dead in the vestibule of his home in Philadelphia, May 15, aged 37. He had been ill a long time with nephritis, and died in a uremic convulsion.

Benjamin J. Clevenger, M.D. Medical College of Indiana, Indianapolis, 1873, for five years postmaster of Redkey, Ind., died at his home in that place, May 10, from dropsy, after an illness of two weeks, aged 55.

Cyrus Truman Meaker, M.D. Dartmouth Medical College, Hanover, N. H., 1887, a prominent dentist of Carbondale, Pa., died at his home in that city, May 9, from pneumonia, after a short illness, aged 57.

John N. D. Cloud, M.D. College of Physicians and Surgeons, New York City, 1883, county physician of Duval County, Fla., died at the Duval County Hospital, Jacksonville, May 7, from septicemia.

Daniel W. Tyndall, M.D. University of Michigan, Ann Arbor, 1864, a surgeon during the Civil War, died at his home in Taylor, Mo., May 16, from uremia, after an illness of three months, aged 67.

Edward A. Bair, M.D. University of Buffalo, N. Y., 1897, of South Buffalo, N. Y., died at the Buffalo Sisters of Charity Hospital, April 23, after a third operation, following appendicitis, aged 35.

J. A. Halteman, M.D. Germany, died at his home in Espanola, N. M., May 6, from congestion of the brain, due to injuries received in a runaway accident three weeks before, aged 60.

Henry H. Critchfield, M.D. Minnesota Hospital Medical College, Minneapolis, 1885, of Hunter, N. D., died suddenly at a hotel in Minneapolis, May 13, from heart disease, aged 43.

Bernard Mackay, M.D. University of Paris, France, a retired physician of New York City, was run over by a fire engine in New York City, May 12, and instantly killed, aged 71.

William E. Garnett, M.D. University of Louisville, 1869, of Cave City, Ky., died at Stanford, Ky., May 4, from disease of the stomach, after an illness of several months, aged 65.

Elbert Wallace Clark, M.D. Rush Medical College, Chicago, 1871, died at his home in St. Albans, W. Va., May 19, from general paresis, after an illness of three years, aged 55.

Nelson Fanning, M.D. Albany (N. Y.) Medical College, 1859, died May 17, at his home in Catskill, N. Y., from injuries received in a fall downstairs, two days before, aged 63.

Albert G. Pottle, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1871, died, May 5, at his home in Canaan, Vt., from appendicitis, after a short illness.

Thomas C. Robinson, M.D. Jefferson Medical College, Philadelphia, 1860, died from apoplexy at his home in Turtle Creek, Pa., May 15, after a brief illness, aged 67.

William P. Buckley, M.D. McGill University, Montreal, 1870, of Prescott, Ont., died in a hospital at Ogdensburg, N. Y., April 2, after undergoing a surgical operation.

Joseph F. Leroux, M.D. Laval University Medical Department, Quebec, 1883, died at his home in Montreal, May 14, from articular rheumatism, aged 55.

Dayton R. Black, M.D. Medical College of Indiana, Indianapolis, 1875, died at his home in Terre Haute, Ind., from pneumonia, May 15, aged 55.

Wilber Fisk Templeton, M.D. New York City, died at his home in Glover, Vt., from paralysis, May 7, after an illness of two weeks, aged 68.

R. G. Coleman, M.D. Medical College of Ohio, Cincinnati, 1867, died at his home in Monarch, Mo., May 12, after a long illness, aged 60.

Hugh H. Davis, M.D. University of Pennsylvania, Philadelphia, 1878, died at his home in Sonoma, Cal., May 8, from heart disease, aged 62.

John V. Curtis, M.D., a veteran of the Mexican and Civil wars, died at his home in Columbus, Ohio, May 12, from senile debility, aged 83.

Henry W. Strong, M.D. University of Michigan, Ann Arbor, 1864, died recently at his home in Byron Center, Mich., and was buried May 11.

Alexander Broadfoot, M.D. Toronto School of Medicine, 1884, died from tuberculosis at his home in Mondovi, Wis., February 14, aged 49.

Hiram Leach, M.D. Illinois, formerly of Fulton, Ill., died recently at Camanche, Iowa, aged 84, and was buried, May 11.

E. Stroup, M.D., postmaster of Nettleton, Mo., dropped dead from heart disease at his home in Nettleton, May 16, aged 60.

Henry Casper Schmitz, M.D. University of Berlin, Germany, 1856, died at his home in Brooklyn, N. Y., May 11, aged 72.

Marshall D. Spencer, M.D. Broome County (N. Y.) Medical Society, 1859, died at his home in Guilford, N. Y., May 2.

John T. Masoner, M.D. Chattanooga (Tenn.) Medical College, 1896, died at his home near Big Springs, Tenn., May 12.

James Torrington, M.D., for many years a practitioner on Peak's Island, Maine, died in Toronto, May 6, aged 93.

Ernest Carter, M.D., L.R.C.S. Edinburgh, 1888, district coroner, died recently at Moosomin, Assiniboia, N. W. T.

Ezekiel W. Bullard, M.D. Missouri, 1877, died recently, and was buried at Pawnee City, Neb., May 18.

John H. Peacock, M.D. Philadelphia, 1864, died at his home in Wilkesbarre, Pa., May 11, aged 80.

Francis Clunie Sibbald, M.D., retired, died at his home in Sutton, Ont., April 7, aged 80.

Chester J. Britton, M.D. Indiana, 1901, of Attica, Ind., was found dead in bed, May 9.

Isaiah Brothers, M.D. Ohio, 1857, died at his home in Youngstown, May 1, aged 73.

Deaths Abroad.

W. His, M.D., professor of anatomy at Leipsic, died there April 30, aged 72. He was one of the founders of the *Archiv. f. Anthropologie* and later of the *Zeitschrift f. Anatomie*, and was the editor of the latter until it merged with the *Archiv f. Anatomie und Physiologie*. He was also a prime mover in the recent endeavor to introduce a uniform anatomic nomenclature.

E. Duclaux, M.D., director of the Pasteur Institute at Paris, and professor of biologic chemistry, died at Paris, May 3, aged 64. His original researches in physics, meteorology and chemistry are all important contributions to science, but his name is best known from his work in microbiology. His *"Ferments et Maladies,"* published in 1882, was one of the pioneers in this line. His *"Traité de Microbiologie,"* 1898, is a classic, and the journal he founded in 1887, *Annales de l'Institut Pasteur*, has always taken a high rank.

Miscellany.

ORGANIZATION IN GERMANY.

Governmental Provisions for the Welfare of the German Medical Profession.

The importance and value of a united and well organized medical profession has been long recognized in Germany, and various legislative means have been adopted to accomplish this result. The system as it now stands resembles somewhat our own local, state and national organization, but in Germany it is compulsory on all physicians. It is supplemented by disciplinary tribunals for ethical questions, and each local organization is accumulating an endowment by its annual dues of $1 to $3, which fund is to be used in aiding physicians or their families in need, in prosecuting impostors and in other matters affecting the welfare of the profession. The above organization is entirely outside of the scientific medical societies, which are like similar strictly scientific bodies elsewhere.

Prussia passed a law, May 25, 1885, which made compulsory the organization of all registered physicians throughout the country. It provided for the grouping of all physicians residing in a province into what are called medical chambers (*Aerztekammer*), the aim of which was stated to be "to promote from every point of view the scientific, material and moral interests of the medical profession." In order to still further foster the spirit of professional unity among medical men a decree in 1896 established a central committee composed of delegates from all the Prussian chambers, according to membership. This central house of delegates is the intermediary between the provincial chambers and the state department which has charge of medical affairs, the universities, etc., being all state institutions in Germany. This central committee has a permanent office at Berlin. Once a year also the members of the medical chambers or their delegates meet at some central point for their annual assembly (*Aerztetag*).

Every physician, without exception, whether he belongs to a scientific society or not, whether he practices or does not practice, whether he is assistant in a hospital or has retired from practice, is required to pay his annual dues to the medical chamber of his province and is subject to its disciplinary court. The medical chamber is entitled by law to use the funds thus provided, as it deems best for the welfare of the profession. The government did not attempt to establish a code of ethics for the profession. This was left for the medical chambers, and the rules they adopt are binding for the physicians in their several jurisdictions. The rules are made by the physicians themselves, assembled in their special medical chamber, and thus conform to the local requirements. In this democratic way a code of ethics for each community is being tentatively worked out. The last four years have realized great progress in this line.

When one chamber adopts a rule that proves to work satisfactorily it is adopted by other chambers, and in this way the various medical chambers act in concert. The various chambers report to the government in regard to epidemics, patent medicines, midwifery, impostors, etc., and prosecute quacks in the common courts, investigate the claims to the title of "Doctor," and other questions affecting the profession. Some of the medical chambers have laid down rules for advertising when a physician locates in a place or returns after an absence, or wishes to advertise the medical institution or sanatorium of which he is proprietor. Some chambers have adopted regulations in regard to specialist practice. No specialist is allowed to do general practice. Specialists now doing a general practice are allowed three years in which to abandon the latter. A physician who wishes to give up his general practice and devote himself to a specialty has to offer testimony to the effect that he has been employed in a hospital for that specialty for several years, in other words, he has to prove himself qualified for the title of specialist. Throughout Germany there is a general disapproval of the so-called "vacation specialist," who goes to some university for the summer, takes a post-graduate course and then returns to his little town and wishes to play the specialist. The Prussian authorities are now collecting a list of all the specialists in the country. The specialist physicians of Berlin have already received a question blank to be filled out and returned, giving name, age, year, date of license to practice, and the specialty practiced, with details as to the training for the specialty, the years during which it was being studied, the institution and the instructor. The question is also asked as to how long the specialty has been practiced as such, and further whether the specialist has his own hospital or clinic or whether he is connected with a public institution, and if so, in what capacity.

PENALTIES FOR DISREGARD OF ETHICAL QUESTIONS.

This system of provincial medical chambers and the central house of delegates is supplemented by the courts of honor, which are also organized, one in each province, with a central supreme court of appeals in Berlin. They were organized in accordance with a law passed Nov. 25, 1899. Each court of honor comprises the president and three members of the medical chamber with one outsider occupying a judicial position and appointed by the president of the medical chamber for a term of six years. Five members constitute a quorum, but no penalty can be pronounced without a majority of four-fifths of the votes. The supreme court of honor comprises the chief of the state department that has charge of medical matters, four members of the central house of delegates and two outside physicians, the latter appointed with two substitutes by the king.

Complaints of one physician against another or from a layman against a physician must be laid before the court of honor of the medical chamber of the province. Both parties have the privilege of appeal to the supreme court of honor which gives the final decision. The penalties are: 1, Warning; 2, censure; 3, fines not to exced $750, and 4, suspension from the right to vote or hold office in the medical chambers, eventually with public announcement of the sentence. The decisions of the supreme court of honor have frequently been referred to in THE JOURNAL, and those having more than local interest have generally been given in full, as, for instance, on page 660.

Criminal proceedings of course come under the jurisdiction of the common courts, and political, scientific or religious opinions or acts can never be a cause for prosecution in the courts of honor. The Saxony medical chamber was recently discussing the question as to whether the expenses of frivolous and ungrounded charges brought by one physician against another should be paid by the complainant. This elicited the statement from one who knew, that fully 23.5 per cent. of all the denuntions in the courts of honor come under this head. Printed copies of all the regulations adopted by the medical chamber of a province are given to all the members and newcomers.

GENERAL INFLUENCE OF ORGANIZATION.

Through the system of medical chambers the profession exerts an influence on all legislative questions concerning drugs, hygienic and sanitary questions and medico-political affairs in general. The state authorities confer with the different medical chambers or the central body, and on their approval depends the acceptance by congress of the proposed legislation. This influence has been beneficially felt in the decree regulating

hypnotic exhibitions and many other useful measures. The other German states and Austria have medical chambers modeled on those of Prussia, but differing in certain respects.

THE FUNDS OF THE MEDICAL CHAMBERS.

The medical chamber receives the fines imposed by the court of honor; it is also authorized to receive bequests, etc., and thus, in addition to the dues, a fund is accumulating to be held in reserve to be used in prosecuting dishonorable practitioners, to relieve physicians or their families temporarily in distress and for other expenses voted for matters affecting the welfare of the profession. Each chamber has the right to dispose of this fund as it deems wise for the good of the profession. Mileage is paid to the members and a small daily fee for attendance. The expenses of the central house of delegates are also paid by assessments on the various medical chambers. We notice in the report of a recent meeting of the Westphalia medical chamber that the suggestion was made that physicians should pay into the treasury a sum corresponding to the regular fees whenever a member of their family has been carried through a sickness by some colleague.

CONTRACT PRACTICE.

The German law of 1883 made insurance against sickness and old age compulsory on all working people receiving less than a certain wage. This is one of the greatest reformatory social movements ever instituted, and its results are far-reaching in every direction. The only thing criticised about it is that the limit of old age is set at 70, while only a small percentage of the working classes reach this age. The limit will probably be reduced to 60 in time, as funds accumulate. The insurance against sickness is not yet compulsory on all working people under a certain wage, but is for most of them.

In consequence of this legislation there have been organized 40 insurance companies, with a total of 23,000 local branches for various trades, etc., and the millionth beneficiary was recently registered. The local sickness insurance companies are entirely independent of the government. They make contracts with physicians to suit themselves and have frequently had nature healers and magnetopaths on their list. The less money they have to pay for medical attendance, the more they have in reserve and the smaller are the assessments of the members. Physicians throughout the country found they were being ground down by these sickness insurance companies, and notwithstanding the extensive system of organization of medical men in the medical chambers nothing effectual was done to better this state of things. The need of some organization to supply financial aid to the contract doctors in their struggle with the societies was realized, and the Leipsic *Verband* was founded for this purpose. Its full title is the *Verband der Aertze Deutschlands zur Wahrung ihrer wirthschaftlichen Interessen.* It has frequently been mentioned in THE JOURNAL. The moving spirit in it is Dr. Hartmann, Leipzig-Connewitz, Südstrasse 121. It now has 15,142 members, with 84 branches, and is aiding many physicians all over Germany in their revolt against the low fees granted by the societies. Another point of controversy is the question of the "free choice" of a physician, or the American plan, as it is called. The insurance societies compelled their policy-holders to employ the physician under contract to them, and would not pay the fee if they called on an outsider. The contract physician sometimes lived miles away from the patient, and may have owed his appointment to some "pull" or other influence. In those places where the "free choice" has been introduced the patient has a choice of different physicians, specialists, etc. The minimum fee is established by the medical chamber and the insurance companies are required to pay this sum. The companies unwilling to pay it are boycotted by the members of the medical chamber, no member being allowed to supply medical services to the society or make contracts with them. Matters were brought to a crisis in this contract practice last spring when a new law went into effect, doubling the length of the period of medical attendance, increasing it from thirteen to twenty-six weeks. Some of the companies would not increase the remuneration of their medical attendants to correspond, and in a large number of places they resigned in a body. The societies found themselves unable to procure other reputable physicians to fill their places, and at several important points the municipal authorities interfered and ordered them to supply the needed number of qualified medical attendants within a certain time limit or the mayor would reinstate the former physicians at their own terms, which was accordingly done when the days of grace expired. The profession regard the use of the term "qualified physicians" in this order as holding out great promise for the future that the state will interfere to protect the profession from further oppression and discountenance contracts with quacks. Some of the details of this conflict between the contract doctors and the insurance societies were published in the news columns on page 543.

The physicians of Bavaria took such a firmly united stand last spring that the companies speedily yielded and accepted their terms, the victory being complete all along the line.

Homeopathy is a subject which in England, at any rate, is so thoroughly dead, says the *British Medical Journal*, that it might safely be buried without fear of rebuke from the Antipremature Burial Association; nor have we any desire to revive it.

State Boards of Registration

COMING EXAMINATIONS.

Nebraska State Board of Health, June 1-2, Creighton Medical College, Omaha. Secretary, Geo. H. Brash, M.D., Beatrice.

New Mexico Board of Health, Santa Fe, June 6. Secretary, D. B. Black, M.D., Las Vegas.

Iowa State Board of Medical Examiners, June 6-7, Des Moines, June 9-10, Iowa City. Secretary, J. F. Kennedy, M.D., Des Moines.

Minnesota State Board of Medical Examiners, Capitol Building, St. Paul, June 7-9. Secretary, C. J. Ringnell, M.D., Minneapolis.

Michigan State Board of Registration in Medicine, Lansing, June 14. Secretary, B. D. Harlson, M.D., Sault Ste. Marie.

Ohio State Board of Medical Registration and Examination, Columbus, June 14-16. Secretary, Frank Winders, M.D., State House, Columbus.

Board of Medical Examiners for the State of Texas, Houston, June 15. Secretary, M. M. Smith, M.D., Austin.

Board of Medical Examiners of Maryland, Lehman's Hall, Baltimore, June 15-18. Secretary, J. McP. Scott, Hagerstown.

Missouri State Board of Health, Kansas City, June 20-22. Secretary, W. F. Morrow, M.D., Kansas City.

Medical Society of Delaware, Dover, and the Homeopathic Medical Society of Delaware State and Peninsula, Wilmington, June 21. Secretary Medical Council, P. W. Tomlinson, M.D., Wilmington.

New Jersey State Board of Medical Examiners, June 21-22, Trenton. Secretary, E. L. B. Godfrey, M.D., Camden.

Medical Examining Board of Virginia, June 21-24, Richmond. Secretary, R. S. Martin, M.D., Stuart.

State Board of Medical Examiners of South Carolina, State House, Columbia, June 28. Secretary, W. M. Lester, Columbia.

State Medical Society of Pennsylvania, June 28 30, Philadelphia and Pittsburg. Secretary, Isaac B. Brown, M.D., Harrisburg.

Territorial Medical Examining Board of Oklahoma, Guthrie, June 29. Secretary, E. E. Cowdrick, M.D., Enid.

Minnesota Report.—Dr. C. J. Ringnell, secretary of the Minnesota State Board of Medical Examiners, reports that at the written examination held at St. Paul, April 5, 6 and 7, 1904, 95 questions were asked on 12 subjects, and a percentage of 75 was required. Of the 12 who were examined 6 passed and 6 failed.

College.	Year Grad.	Per Cent.
PASSED.		
University of Minnesota	(1903)	81.3, 79.3
College of Physicians and Surgeons, Chicago	(1903)	79.0
Bennett Medical College	(1901)	76.2
Hamlin University	(1903)	77.4
Northwestern University Medical School, Chicago	(1902)	79.3
FAILED.		
Miami Medical College	(1871)	50.2
Keokuk (Iowa) Med. Coll.	(1900) 71.6, (1904)	*76.2
Detroit College of Medicine	(1903)	68.5
Hamlin University	(1903)	74.5
N. W. Univ. Woman's Med. Coll., Chicago	(1890)	59.7

*Was not granted a license because his mark in materia medica was so low.

Georgia Report.—Dr. I. H. Goss, Athens, Ga., president of the Regular Board of Medical Examiners of the State of Georgia, reports that at the written examination held at Atlanta, March 30, 1904, 51 questions were asked on 10 subjects, and a percentage of 75 was required. Of the 42 who were examined 39 passed and 3 failed.

College.	Year Grad.	Per Cent.
PASSED.		
Atlanta College of Physicians and Surgeons (1904) 79, 78, 78, 84, 80, 87, 81, 81, 77, 78, 79, 79, 77, 89, 83, 75, 88, 79, 75, 76, 81, 80, 81, 85.		
University of Maryland	(1902)	78
Bellevue Hospital Medical College	(1877)	76
Chattanooga Medical College	(1904)	80, 78, 80
New York Coll. of Phys. and Surgs	(1901)	98
University of France	(1898)	76
Meharry Medical College	(1902) 76, (1904) 97,	80, 83, 81
Jefferson Medical College	(1884)	79
Memphis Medical College	(1899)	76
Johns Hopkins Medical College	(1903)	83
FAILED.		
Meharry Medical College	(1904)	74, 68
Chattanooga Medical College		72

The questions asked were as follows:

CHEMISTRY.

1. Give the symbol, atomic weight and valence of each of five elements. 2. Distinguish between id and ate terminations. Give formula for potassium chlorid and potassium chlorate. 3. How many minims in one c.c. of water? 4. What is a hydracid? an oxyacid? 5. What is an empirical formula?

PHYSIOLOGY.

1. Give principal events in gastric digestion. 2. Define blood pressure. State the factors which increase and decrease blood pressure. 3. State, approximately, the amount of oxygen consumed and the amount of carbon dioxid produced in respiration in twenty-four hours. 4. Describe the secreting structures of the kidneys. 5. Give origin and distribution of sympathetic nerve fibers. Name the three classes into which its ganglia are divided.

MATERIA MEDICA AND THERAPEUTICS.

1. Give symbols of minims, fl. drams, fl. ounces, pint, gallon. 2. Give difference between anesthetic and analgesic. Examples of each. 3. (*a*) Define motor excitants. (*b*) Name the most important. (*c*) Therapeutics and doses. 4. (*a*) Source of turpentine, (*b*) its composition, (*c*) action, external and internal, (*d*) its principal preparation, (*e*) therapeutics and doses. 5. Write a prescription for gastric fermentation containing carbolic acid, bismuth subnitrate, glycerin, peppermint water.

GYNECOLOGY.

1. Describe the technic for a simple curettage, for curettage after an abortion, for carcinoma which can not be removed radically. 2. Describe an operation for lacerated perineum, for lacerated cervix. 3. Describe an operation for cystocele, rectocele and prolapsed uterus to second degree. 4. Give differential diagnosis between ectopic gestation, pyosalpinx and appendicitis. 5. Name some of the causes of pelvic suppuration. State how you would treat an ovarian or tubal abscess attached to vaginal wall.

SURGERY.

1. Describe an amputation at lower third of the thigh. 2. What is surgical shock and how would you treat it? 3. What is fracture; what is dislocation; how would you treat a compound, comminuted fracture of the leg at its middle third? 4. What is varicocele; hydrocele? Describe operation for both conditions. 5. What is hernia? Describe an operation for radical cure for inguinal hernia.

PRACTICE.

1. Give etiology of polyomyelitis, (*a*) give some of the most prominent symptoms, (*b*) give location of lesion. 2. Give the most distinguishing symptoms of smallpox; give the three forms and types of each. 3. Give etiology and treatment of lobar pneumonia. 4. What is the essential cause of rachitis? Give treatment. 5. Location of the lesion in acute dysentery in children. Give treatment.

OBSTETRICS.

1. Diagnose placenta previa. Describe method of treating same. 2. Describe method of handling case of post-partum hemorrhage. 3. Give method of handling puerperal eclampsia. 4. Name the three stages of labor. Describe beginning and termination of each. 5. Give the presumptive and certain signs of labor.

DIAGNOSIS.

1. What is vocal fremitus? What conditions: (*a*) increase vocal fremitus, (*b*) diminish vocal fremitus? 2. Mention the aids to diagnosis that are of practical use in medicine and surgery. 3. Describe the diagnostic characteristics of acute appendicitis. 4. Differentiate rheumatic arthritis and joint tuberculosis. 5. Differentiate acute cerebral meningitis from syphilitic gumma.

ANATOMY.

1. (*a*) Describe the frontal bone and (*b*) name its articulations. 2. (*a*) Give the names of the muscles of the thigh and (*b*) state the origin, insertion and action of any one of the muscles mentioned. 3. Describe the origin, course and distribution of the renal arteries. 4. (*a*) Describe the portal system of veins and (*b*) give portal circulation. 5. Describe the sympathetic nerve, naming and locating the principal ganglia. 6. Give the anatomy of the skin and of its appendages.

PATHOLOGY.

1. Give pathology of interstitial nephritis. 2. Define arthritis deformans and give its morbid anatomy. 3. Discuss the pathologic conditions in herpes zoster. 4. Describe pus and give its essential elements. 5. Name the bacteria usually associated with ordinary inflammation and suppurative processes.

An examination was also held at Augusta, April 2, 1904, at which 50 questions were asked on 10 subjects, and a percentage of 75 was required. All of the 32 who were examined passed.

College.	Year Grad.	Per Cent.
PASSED.		
University of Georgia (1903) 80, 82, (1904) 80, 86, 80, 80, 85, 84, 92, 83, 78, 85, 83, 79, 84, 82, 80, 86, 77, 79, 80, 81, 83, 83, 80, 86, 83.		
University of the South, Sewanee, Tenn	(1901)	83
Maryland Medical College	(1903)	87
University of Nashville, Tenn	(1904)	84
Memphis Hospital Medical College	(1903)	79
Society of Apothecaries, London, England	(1889)	92
College of Physicians and Surgeons, Baltimore		88

The questions asked were as follows:

CHEMISTRY.

1. Give the formula of each of three compounds and give name of each. 2. Distinguish between ous and ic terminations. Give formula for mercurous and mercuric chlorid. 3. State approximately, how many grains in two decigrams. 5. What is a graphic formula? Illustrate.

PHYSIOLOGY.

1. State the composition and functions of pancreatic juice. 2. What are the forces which keep the blood in circulation? 3. Where and by what mechanism does the exchange of gases take place in respiration? 4. State the average amount of water, urea and uric acid excreted by the kidneys in twenty-four hours. 5. Briefly give the arrangement and functions of the sympathetic nervous system.

ANATOMY.

1. State what organs are partly and what are entirely invested by the peritoneal membrane. Describe the reflections of the pelvic peritoneum in the female. 2. State the origin, the insertion, the action and the nerve and the blood supply of the pectoralis major muscle. 3. Describe the axillary artery and mention its branches. 4. Describe the principal fissures of the brain. 5. Describe the ductus communis choledochus. Where and into what does it empty? 6. Give gross anatomy of spinal column.

OBSTETRICS.

1. Differentiate between vertex and breech presentation. 2. Name some of the most common causes of ante-partem hemorrhage. 3. What are the most common causes of post-partum hemorrhage? (*a*) How would you manage a case? 4. Give definition of puerperal fever. (*a*) Give prophylactic and curative treatment. 5. Etiology of crural phlebitis. What would be your treatment?

GYNECOLOGY.

1. Name the female organs of generation. Describe briefly the fallopian tubes. 2. What is meant by menstruation, fecundation and impregnation? Define dysmenorrhea and name some of the commonest cause of this condition. 3. Describe some of the positions used in the diagnosis of pelvic diseases. 4. Outline briefly technic for a plastic operation on the generative organs. 5. Outline briefly technic of a celiotomy. Describe the necessary preparatory treatment of patient.

SURGERY.

1. Give indications for skin grafting and state method of doing it. 2. Give indications for and state method of doing colotomy. 3. What is inflammation? How may it terminate? 4. Give diagnosis and treatment of erysipelas. 5. What is empyema and how would you diagnose and treat it?

PATHOLOGY.

1. Describe the process of wound repair. 2. What are toxins? How does the system dispose of toxins? 3. State some of the structural changes that may occur in red blood corpuscles. 4. What structural changes occur in cirrhosis of the liver? 5. Describe (*a*) coccus, (*b*) bacillus, (*c*) the spirillum.

PRACTICE.

1. Give chief etiologic factors in acute gastroenteritis of childhood, (*a*) give both prophylactic and curative treatment. 2. Give symptoms of intussusception in children, (*a*) give treatment. 3. Contrast the type of rheumatism in adults and children, clinically. 4. Define diabetes mellitus. 5. What is sun-stroke? (*a*) How would you treat a case?

MATERIA MEDICA AND THERAPEUTICS.

1. (*a*) Indications to be kept in mind in the treatment of poisoning. (*b*) Name a deadly vegetable and mineral poison very frequently used in practice, with doses of same. 2. (*a*) Source of ichthyol, (*b*) characters, (*c*) therapeutics, (*d*) dose. 3. Write a prescription for ascarides containing santonin, calomel and sugar. 4. (*a*) Give the action of chloral, (*b*) symptoms of poisoning by same, with treatment, (*c*) therapeutics. 5. (*a*) Name three acids from vegetable and three from animal kingdom, (*b*) action of acids, (*c*) therapeutics and doses.

DIAGNOSIS.

1. Make a diagnosis of dislocated movable kidney (floating kidney.) 2. Give the procedure of examining sputum for tubercle bacilli. 3. Give some of the pathologic changes occurring in the later stages of syphilis. 4. What are the intestinal changes in chronic enteritis? 5. Diagnose and treat a case of cystitis. (*a*) acute and (*b*) chronic.

Association News.

THE ATLANTIC CITY SESSION.

Railroad Rates—How to Register—New York Society Members Invited—Other Details.

The Atlantic City session is but ten days away, and everything points to a large and enthusiastic gathering. The rate of one fare for the round trip has been granted from the Pacifi coast, from the central, the western and the southeastern portions of the United States, while in New England a rate of one and one-third fare for the round trip on the certificate plan has been granted. Tickets are to be on sale June 1, 2, 4, 5 and 6. In the Central and Western Passenger Association territory, tickets will also be sold Tuesday, May 31; at points still farther west tickets will be sold at correspondingly earlier dates.

The rate from New York City will be $4.25 for the round trip. Tickets will be sold June 2, 3, 5 and 6, and will be good for return from June 4 to 13. The rate from Chicago will be $20.25.

No stop-over will be allowed at Philadelphia on the going trip. This is a change in the plan, as we have been informed by the railroad officials since the last issue of THE JOURNAL. As the rules concerning stop-overs now stand, stop-over will be allowed at Philadelphia, Baltimore and Washington on the return trip only, within the final limit of the ticket by deposit of the ticket immediately on arrival at the place at which it is desired to stop. Another change in the announcement of last week is as follows: We stated that the Grand Trunk Railroad would run special sleepers to Atlantic City. On this we were misinformed, as the Grand Trunk sleepers will run only to Philadelphia, at which point there will be a change of cars. In other respects, the announcement in THE JOURNAL of May 21 is correct, and to it our readers are referred for further particulars. A special train leaves Chicago on the Pennsylvania Lines Sunday, June 5, at 2 p. m., and will run to Atlantic City without change.

The above information, while applying to only two or three points of departure, will give an idea of the rates from all over the country. Members desiring specific information should apply to their local ticket agent, who will have full particulars in the form of circulars, etc., and information that can be had only at the local point.

Registration at Atlantic City—Some Suggestions.

The Registration Bureau will be open for the registration of members at 8 o'clock Monday morning, June 6, and will remain open until 5:30 p. m. These hours will prevail each day until Friday, June 10, when the hours will be from 9 to 11 a. m., the bureau closing at 11.

Members will do well to go to their hotels immediately on arriving, and, having located, to the bureau and register.

The method of registration is as follows: Members will find cards at the bureau, which they will fill out. These cards are double; the upper relates particularly to registration and the attached card is intended for two purposes—the first to indicate the section with which the member desires to affiliate himself, and the second will be the basis for the list that will be published in THE JOURNAL after the session. When these cards are filled out, the member will present them at the indicated window, and if he has paid his dues for 1904, he will show his "pocket card." If he has not paid his dues for 1904, he will present the registration cards at a cash window and there pay the amount due.

Members are urged to take with them their pocket cards. It will save them, as well as the clerks at the Registration Bureau, much annoying delay.

NEW MEMBERS.

Physicians who desire to join the Association at Atlantic City must bring with them a certificate showing they are members of their state association or of one of its component branches. This is important. The certificate should be signed by the president and secretary of the state association or by the president and secretary of a component society.

House of Delegates.

The House of Delegates will be called to order promptly at 10 a. m., Monday, June 6, at the High School Building. The Committee on Credentials and Registration will be at the High School Building at 9 a. m. for the registration of the members of the House of Delegates. Members are urged to be present at 9 o'clock, or as soon after as possible, so that the registration may be completed by the time the meeting is called to order.

Rush Monument Dedication.

The announcement last week that the dedication of the Rush monument would be at 4 p. m., Saturday, June 11, was an error. The hour fixed is 5 p. m.

Place of Session in 1905.

Portland, Ore., Los Angeles, Cal., and Hot Springs, Ark., are among the many cities desirous of entertaining the American Medical Association in 1905. We mention the names as matters of news, and without any official announcement of their proposal. We quote here as of interest in this connection what *Northwest Medicine* (Seattle, Wash.) says concerning the candidacy of Portland:

SHALL THE AMERICAN MEDICAL ASSOCIATION VISIT PORTLAND?

We are pleased to note that the Portland profession has worked vigorously for the meeting in 1905. While the result is still in the air, our eastern friends have been evidently impressed with the project of going west again. In order not to appear behind their neighbors to the north, the profession in southern California came into line and have solicited the meeting for their state. We feel little uneasiness on this account. On the contrary, it will help the interests of the northwest by calling attention more strongly to the Pacific coast. If these two sections were alone in competition for the desired meeting we would peacefully permit the question to be decided on the respective attractions of the two.

When the invitation of Portland was first presented the chief question seemed to hinge on the ability of that city to entertain the visitors. We believe this matter will be satisfactorily handled. In connection with the Lewis and Clark Fair, accommodations will be provided that will amply satisfy all demands. If the fair were not then in contemplation, the question of limited accommodations would have more force.

The objection on the score of distance seems to us westerners somewhat of a joke. The man of maturity who has not crossed the continent and thus obtained a realizing sense of the extent and magnitude of his native land, ought to retire from practice long enough to educate himself and be able to intelligently discuss, from personal knowledge, the attractions of the richest and greatest country the Creator has presented to mankind, his own inheritance. The *Medical Sentinel* has recently depicted in glowing terms the beauties that Nature has so generously bestowed on its home city and surroundings. While not wishing to detract one whit from the truths therein contained, we wish to call the attention of our eastern visitors to the fact that Puget Sound and Alaska offer scenery, of water, of mountain and forest combinations, of such magnitude and variety, that the familiar and famed landscapes of the Old World are dwarfed in comparison. The Alaska trip alone is the recollection of a lifetime. Naturally a large proportion of the visitors will plan to return by a northern route and inspect all that is available in the allotted time. Opportunities to this end will be provided by those familiar with local conditions and attractions.

Justice to the Pacific coast seems to demand the meeting of 1905 in the far west. We shall continue to trust and urge that the officials of the Association may select Portland for this meeting, realizing that circumstances so favorable as at the present time for holding a session in this section may not again arise.

Invitation to Members of the New York State Medical Society.

Dr. Musser, President-elect of the American Medical Association, has sent the following letter to the president of the Medical Society of the State of New York:

PHILADELPHIA, May 23, 1904.

My Dear Dr. Wey:—At the suggestion of some members of the New York State Medical Association, and in accordance with my own desires, I hereby extend to you and, through you, to the members of the Medical Society of the State of New York, an invitation to attend the session of the American Medical Association, at Atlantic City, June 7 to 10, and to take part in the scientific proceedings.

Trusting to have the opportunity of meeting you all, I am

Very sincerely, J. H. MUSSER.

The Public Service.

Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, week ending May 21, 1904:

Miller, R. B., asst.-surgeon, leave extended one month.

Bingham, E. G., asst.-surgeon, left Ord Barracks, Cal., with squadron Ninth Cavalry en route to Sequoia and General Grant Parks, Cal., for duty.

Pipes, Henry F., asst.-surgeon, left Ord Barracks, Cal., with squadron Ninth Cavalry en route to Yosemite, National Park, Cal., for duty.

Waterhouse, S. M., asst.-surgeon, reports for duty at Fort Worden, Wash.

Ford, Clyde S., asst.-surgeon, returned to Fort H. G. Wright, N. Y., from leave of absence.

Winter, Francis A., asst.-surgeon, left Fort Huachuca, Ariz., with B, Fifth Cavalry, changing station to Fort Grant, Ariz.

McAndrew, P. H., asst.-surgeon, returned to station at Jefferson Barracks, Mo., from leave of absence.

Stiles, Henry R., Munson, Edward L., Sweazey, Verge E. and Krebs, Lloyd Le Roy, asst.-surgeons, arrived at San Francisco, left Manila on the *Sherman* April 15, 1904.

Winn, Robert N., asst.-surgeon, relieved from duty at Fort Grant, Ariz., and ordered to Fort McDowell, Cal., for duty at the depot of recruits and casuals.

Murray, Alexander, asst.-surgeon, relieved from duty as surgeon on the U. S. Army transport *Sheridan* and ordered to General Hospital, Fort Bayard, N. M., for duty.

Lynch, Charles, asst.-surgeon, detailed member of the General Staff Corps. Captain Lynch will report in person to the chief of staff in Washington.

Munson, Edward L., asst.-surgeon, relieved from further duty in the Philippine Division and ordered to U. S. General Hospital, Fort Bayard, N. M., for duty.

Hogue, Gustavus I., contract surgeon, left Fort McDowell, Cal., May 9 on leave of absence for one month, with permission to apply for an extension of one month.

Halsell, John F., contract surgeon, granted leave of absence for one month from Fort McIntosh, Texas, with permission to apply for an extension of one month.

Wall, Francis M., contract surgeon, left Camp George H. Thomas, Ga., May 15 for duty at target range, Waco, Ga.

Van Kirk, Harry H., contract surgeon, ordered to proceed, when relieved at Fort Washakie, Wyo., to Fort Sill, Okla., for duty.

Davis, William R., contract surgeon, assigned to duty as surgeon of the transport *Sheridan*.

Peck, Luke B., contract surgeon, ordered to proceed from Jersey City, N. J., to Fort Andrews, Mass., for duty.

McMillan, Clemens W., contract surgeon, left Fort Ethan Allen, Vt., May 16 for temporary duty at target range, Fort Niagara, N. Y.; whence he is to return to his proper station, Fort Myer, Va.

Kennedy, James S., contract surgeon, relieved from duty at the depot of recruits and casuals, Fort McDowell, Cal., and ordered to Fort Grant, Ariz., for duty.

Dewey, Frederick S., contract surgeon, assigned to duty at Oklahoma City, Okla., as attending surgeon and examiner of recruits.

Decker, George M., contract dental surgeon, ordered to proceed to Forts Du Chesne and Douglas, Utah, for professional duty, and then to return to his proper station, Fort Logan, Colo.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending May 21, 1904:

Snyder, J. J., P. A. surgeon, detached from the *Kearsarge* and ordered to the *Maine*.

Bucher, W. H., surgeon, detached from the Naval Station, Cavite, P. I., and ordered to the Naval Hospital, Yokohama, Japan.

Thompson, E., surgeon, commissioned surgeon, with the rank of lieutenant commander, from March 3, 1903.

Furlong F. M., P. A. surgeon, detached from duty with the marine battalion on the *Dixie* and ordered home and to await orders.

Butler, C. St. J., P. A. surgeon, commissioned P. A. surgeon with the rank of lieutenant, from Oct. 28, 1903.

Marcour, R. O., asst.-surgeon, detached from duty with the marine battalion on the *Dixie* and ordered to the *Hancock*.

Rossiter, P. S., asst.-surgeon, detached from the Naval Recruiting Station, Baltimore, and ordered to the Naval Station, Honolulu, H. I., sailing from San Francisco via steamer *Abarenda*, June 4.

Owens, W. D., asst.-surgeon, appointed asst.-surgeon, with rank of lieutenant, junior grade, from May 17, 1904.

Sellers, F. E., A. A. surgeon, appointed A. A. surgeon from May 17.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service, for the seven days ended May 19, 1904:

Carter, H. R., surgeon, to report at Washington, D. C., for special temporary duty.

Woodward, R. M., surgeon, granted leave of absence for three months from June 14.

Eager, J. M., P. A. surgeon, reassigned to duty at the port of Naples, Italy, effective March 25, 1904.

Francis, Edward, asst.-surgeon, to proceed to Martinsburg, W. Va., for special temporary duty.

Burkhalter, J. T., asst.-surgeon, ten days' extension of leave of absence, granted by Bureau telegram of May 9, 1904, revoked.

Alexander, E., A. A. surgeon, granted leave of absence for seven days from May 19.

Kennard, K. S., A. A. surgeon, granted leave of absence for fourteen days from May 22.

Walker, R. T., A. A. surgeon, granted leave of absence for four days from May 31.

Walkley, W. S., A. A. surgeon, granted leave of absence for nine days from May 24.

Rodman, J. C., A. A. surgeon, granted leave of absence for four days from May 24.

Carlton, C. G., pharmacist, granted leave of absence for thirty days from June 1.

Bierman, C. H., pharmacist, granted leave of absence, on account of sickness, for one day (May 9).

Van Ness, G. L., Jr., pharmacist, granted leave of absence for thirty days from June 1.

BOARDS CONVENED.

Board convened at Baltimore, May 18, 1904, for the physical examination of cadets in the Revenue-Cutter Service. Detail for the board: Surgeon H. R. Carter, chairman, Asst.-Surgeon C. W. Wille, recorder.

Board convened at Stapleton, N. Y., May 18, 1904, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Surgeon Preston H. Bailhache, chairman; P. A. Surgeon A. C. Smith, recorder.

Board convened at Washington D. C., May 18, 1904, for the physical examination of applicants for appointment in the Revenue-Cutter Service. Detail for the board: Asst.-Surgeon-General L. L. Williams, chairman; Asst.-Surgeon-General W. J. Pettus, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended May 21, 1904:

SMALLPOX—UNITED STATES.

California: Los Angeles, April 30-May 7, 1 case; San Francisco, April 24-May 1, 1 case.
District of Columbia: Washington, April 30-May 14, 8 cases.
Florida: Jacksonville, May 7-14, 1 case.
Illinois: Chicago, May 7-14, 11 cases; Danville, April 30-May 7, 2 cases.
Indiana: South Bend, May 7-14, 8 cases.
Kentucky: Covington, May 7-14, 3 cases.
Louisiana: New Orleans, May 7-14, 16 cases, 8 imported.
Maine: Jonesport, May 16, present.
Maryland: Baltimore, May 7-14, 1 cases, 1 death.
Michigan: May 7-14, Detroit, 5 cases; Grand Rapids, 5 cases.
Missouri: St. Louis, May 7-14, 14 cases, 4 deaths.
Nebraska: Omaha, May 7-14, 3 cases.
New Hampshire: Manchester, May 7-14, 4 cases.
New York: May 7-14, Buffalo, 2 cases; New York, 2 cases.
Ohio: May 6-13, Cincinnati, 7 cases; Cleveland, 2 cases, 1 death; Dayton, May 7-14, 12 cases.
Pennsylvania: May 7-14, Norristown, 1 case; Philadelphia, 27 cases, 5 deaths; Pittsburg, 2 deaths.
South Carolina: Charleston, May 7-14, 1 case.
Tennessee: May 7-14, Memphis, 16 cases; Nashville, 4 cases.
Wisconsin: Milwaukee, May 7-14, 8 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, April 2-9, 2 cases, 2 deaths.

SMALLPOX—FOREIGN.

Austria: Prague, April 23-30, 7 cases.
Belgium: Antwerp, April 23-30, 13 cases, 8 deaths.
Brazil: Bahia, April 8-23, 6 cases.
Canada: May 7-14, Sydney, 17, to date 61; Winnipeg, 1 case.
Colombia: Barranquilla, April 24-30, 2 deaths.
France: Paris, April 16-30, 27 cases, 2 deaths; Rheims, April 24-May 1, 1 death.
Germany: Barmen, April 22 29, 4 cases on S. S. Wittikind.
Great Britain: Birmingham, April 30-May 7, 1 case; Glasgow, April 29-May 6, 22 cases, 3 deaths; April 23-30, Hull, 3 cases; Liverpool, 7 cases; April 16-30, London, 35 cases, 4 deaths; Manchester, 10 cases, 3 deaths; New Castle-on-Tyne, 18 cases, 1 death; Nottingham, 9 cases, 1 death; Sheffield, 10 cases; South Shields, 14 cases.
India: Bombay, April 5-19, 34 deaths; Calcutta, April 3-10, 4 deaths; Karachi, April 10-17, 11 cases, 3 deaths.
Italy: Catania, April 8-May 5, 2 cases, 1 death.
Japan: Kobe, April 2-16, 3 cases; Nagasaki, April 10-20, 249 cases, 43 deaths.
Java: Batavia, March 26-April 9, 20 cases, 2 deaths.
Mexico: City of Mexico, March 27-April 3, 4 cases, 9 deaths; *April 16-May 8, 14 cases, 2 deaths; April 23-30, Tampico, 1 death; Vera Cruz, 1 case; Torreon, April 24-May 7, 27 cases, 15 deaths.
Netherlands: Rotterdam, April 23-May 7, 9 cases, 1 death.
Russia: Moscow, April 8-23, 9 cases, 1 death; Odessa, April 23-30, 1 case; St. Petersburg, April 16-23, 7 cases, 4 deaths.
Spain: Barcelona, April 1-30, 9 deaths.
Turkey: Beirut, April 21-28, present.

YELLOW FEVER.

Ecuador: Guayaquil, April 16-23, 6 deaths.
Mexico: May 11, Talleres, 1 case; Tehuantepec, 1 case.

CHOLERA.

India: Madras, Apri 9-15, 1 death.
Turkey: Basra, April 1-10, 37 cases, 28 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, April 2-9, 3 cases, 2 deaths.

PLAGUE—FOREIGN.

Africa: Cape Colony, April 8-16, 1 case, 1 death.
Egypt: April 8-16, 59 cases, 36 deaths; Port Said, 1 case, 1 death.
India: Bombay, April 12-19, 633 deaths; Karachi, April 10-17, 365 cases, 285 deaths; Madras, April 9-15, 1 death.
Formosa: March 31-April 9, 229 cases, 167 deaths.
New Zealand: Auckland, April 29, 2 cases, 1 death.
Peru: Callao, April 10-24, 2 cases, 2 deaths; Lima, April 16-23, 9 cases, 11 deaths.

Medical Organization.

Indiana.

INDIANA STATE MEDICAL ASSOCIATION.—This association met in Indianapolis, May 19 and 20, 1904, with an attendance of more than 500. The secretary reported a paid membership of 1,947, with probability that this would be increased to nearly 2,100 before the Transactions go to press. Eighty-four charters have been issued to county societies, making a gain of 13 organizations this year. The meeting was very profitable and interesting. "Medical Education" and "Tuberculosis" were the subjects that called forth the most animated discussions. Resolutions were adopted favoring a state hospital for tuberculosis. West Baden was chosen as the next place of meeting, and the following officers were elected: President, Dr. George T. McCoy, Columbus; vice-presidents, Drs. Homer J. Hall, Franklin; Claude T. Hendershot, Cannelton, and David J. Loring, Valparaiso; secretary, Dr. Frederick C. Heath, Indianapolis; treasurer, Dr. Albert E. Bulson, Jr., Ft. Wayne; and councilors, First District, Dr. William R. Davidson, Evansville; Second, Dr. George Knapp, Vincennes; Third, Dr. Harry C. Sharpe, Jeffersonville; Fourth, Dr. William H. Stemm, North Vernon; Fifth, Dr. Myron A. Boor, Terre Haute; Sixth, Dr. David W. Stevenson, Richmond; Seventh, Dr. William N. Wishard, Indianapolis;

*Report April 3-10, returned for correction. Report from April 10-17 will be found in Health Reports sent May 7.

Eighth, Dr. General W. H. Kemper, Muncie; Ninth, Dr. Paul J. Barcus, Crawfordsville; Tenth, Dr. Edward G. Blinks, Michigan City; Eleventh, Dr. Robert Hessler, Logansport; Twelfth, Dr. Albert E. Bulson, Jr., Fort Wayne, and Thirteenth, Dr. Charles A. Daugherty, South Bend.

West Virginia.

WEST VIRGINIA STATE MEDICAL ASSOCIATION.—The thirty-seventh annual meeting was held at Fairmont, May 10-12, the register showing 119 members present, a satisfactory attendance considering that this was the first meeting to be conducted on the new plan of organization. The secretary's report showed a steady progress in organization. The prospects for a complete organization of the profession of the state in the near future are very good. The following officers were elected: President, Dr. Thomas M. Hood, Clarksburg; vice-presidents, Drs. William C. Jamison, Fairmont, Edgar H. Parsons, Piedmont, and Arthur A. Shawkey, Charleston; secretary, Dr. William W. Golden, Elkins; treasurer, Dr. Vincent T. Churchman, Charleston; councilors: first district, Dr. Rezin W. Hall, Moundsville; second district, Dr. Martin F. Wright, Burlington; third district, Dr. Timothy L. Barber, Charleston; fourth district, Dr. William S. Keever, Parkersburg, and fifth district, Dr. Corydon R. Enslow, Huntington. Wheeling was elected for the next meeting place.

Society Proceedings.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, N. J., JUNE 7-10

American Medico-Psychological Assn., St. Louis, May 30-June 3.
Amer. Laryn., Rhin., and Otol. Society, Chicago, May 30-June 2.
South Dakota State Medical Association, Redfield, June 1-2.
Maine Medical Association, Portland, June 1-3.
International Assn. of Railway Surgeons, Chicago, June 1-3.
Minnesota State Medical Society, Minneapolis, June 2-3.
American Therapeutic Society, New York City, June 2-4.
American Dermatological Association, Niagara Falls, June 2-4.
Rhode Island Medical Society, Providence, June 3.
Conf. of State and Prov. Bds. of Health of N. A., Wash., June 3-4.
Indian Territory Medical Association, Holdenville, June 3-5.
American Academy of Medicine, Atlantic City, June 4-6.
Medical Society of New Jersey, Atlantic City, June 4-7.
Nat. Conf. State Med. Exam. and Lic. Bds., Atlantic City, June 6.
American Medical Editors' Association, Atlantic City, June 6.
American Assn. Life Ins. Exam. Surgs, Atlantic City, June 6.
American Gastro-Enterological Association, Atlantic City, June 6.
Nat. Assn. of U. S. Pen. Exam. Surgs., Atlantic City, June 6-7.
Association of American Medical Colleges, Atlantic City, June 6.
Massachusetts Medical Society, Boston, June 7-8.
American Protologic Society, Atlantic City, June 8-9.
American Orthopedic Association, Atlantic City, June 8-10.
American Urological Association, Atlantic City, June 10-11.
Medical Society of Delaware, Lewes, June 14.
Wisconsin State Medical Society, Milwaukee, June 22.

SECOND LATIN-AMERICAN CONGRESS.

Held at Buenos Ayres, April 3-10, 1904

The President, Prof. E. R. Coni, in the Chair.

The first medical congress to unite all the countries of South America, Mexico and the West Indies was held in 1901 in Chili, in the midst of troublous political rumblings. The sky has since cleared, and the congress held last month at Buenos Ayres was under the most favorable auspices. The membership was 1,068, including 477 physicians from countries outside of Argentine, many of them delegates from scientific societies. Nearly 260 communications were presented, the larger number being on subjects relating to hygiene and bacteriology. About 250 exhibitors took part in the "international exposition of hygiene," which included exhibits showing the details and progress of the national antituberculosis leagues and the Red Cross.

Etiology of Yellow Fever.

DR. JOSÉ PENNA is professor of clinical epidemiology at Buenos Ayres, and has long had charge of the isolation hospital. His address on "Yellow Fever" reviewed all the testimony to date presented, including some unpublished work, and unhesitatingly announced that Sanarelli's statements in regard to the icteroid bacillus had been confirmed by time and experience, with complete substantiation of all his claims. The Havana experiences are qualified as undemonstrative and inadequate. The Havana commission has not yet offered proof that the experimental disease induced by the bites of infected mosquitoes is true yellow fever. The circumstances of their tests are not conclusive as to the possibility of contagion from infected articles. The same criticism applies also to the work of the French yellow fever commission. Prophylaxis of yellow fever should be based as heretofore on disinfection and isolation, but international prophylaxis should suppress every measure that interrupts free circulation and commerce. His final conclusion is to the effect that if the mosquito should prove after all to be the intermediate host of the true yellow-fever germ, our efforts should be devoted not to exterminate it, but to cherish and cultivate it as the providential agent for immunization, as we preserve and utilize cowpox material. The fact that Sanarelli's serum treatment of yellow fever has not met with great success may be due to the small doses used. Penna was skeptical at first himself, but after becoming more familiar with serum treatment in general, and witnessing its success in diphtheria and in 160 cases of bubonic plague, in tetanus, anthrax and erysipelas, he became convinced that the failures were due to the ridiculously small tentative dosage. Similar doses in the above affections would be equally ineffectual. All the arguments presented against Sanarelli's assertions are superficial and theoretical. None of those who impugn the results of his research has repeated his experiences; none of them has inoculated the icteroid bacillus or its toxins in any of the human beings who have volunteered their services for experimentation. None of them has inoculated animals under the same conditions as Sanarelli. Sternberg, Agramonte, Reed and Carroll are mute in this respect. Why did they not experiment with the toxin of the icteroid bacillus? Penna thinks that research in this line is now indicated. Bandi of Sao Paulo and others of large clinical experience also regard the mosquito theory as far from being conclusively demonstrated as yet. Penna's address is given in full in the *Semana Medica* of April 7. Penna's views were opposed by the other speakers. See page 1430.

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-fourth Annual Meeting, held at Bloomington, May 17-19, 1904.

Under the Presidency of Dr. Carl E. Black, Jacksonville.

The New Officers.

The following officers were elected for the ensuing year: President, Dr. William E. Quine, Chicago; vice-presidents, Drs. H. C. Mitchell, Carbondale, and J. F. Percy, Galesburg; secretary, Dr. E. W. Weis, Ottawa; treasurer, Dr. Everett J. Brown, Decatur. Rock Island was selected as the place for holding the next annual meeting.

The scientific work was divided into two sections, medical and surgical. We present herewith brief abstracts of many of the papers:

The Contagiousness of Typhoid Fever and the Vitality of the Typhoid Germ.

DR. F. D. RATHBURN, Galesburg, pointed out the vitality of the typhoid bacillus, both inside and outside the living body, and their power to generate in soils and other favorable media. He emphasized the importance of disposing of the excreta to prevent the spread of the disease. The germ has been shown to remain active for a considerable length of time after the fever in (1) post-typhoid abscess; (2) the urine; (3) contents of lung cavities; (4) gall bladder, and (5) evacuations from the bowels. The proper disposition of the excreta is the only method of prevention. Cremation he considered the best method. When cremation is not practicable, he suggests that the excreta be deposited in heavily glazed earthenware receptacles, treated with germicides, and buried deeply at a distance from the water supply.

Mental Disorders of Neurasthenia.

DR. FRANK P. NORBURY, Jacksonville, said that the mental symptoms of this disease are of importance in every case. They vary from slight mental incapacity to a pronounced state of insanity. The principal symptoms mentioned are intro-

spection, imperative conceptions, morbid fears, irritability (marked by absence of symmetry), nagging, fault-finding, and excessive emotional outbreaks. The treatment consists of isolation, systematized rest, with adjuvants indicated in each case; also treatment of associated physical factors.

The Treatment of Appendicitis from a Pathologic Standpoint.

DR. E. C. FRANING, Galesburg, pointed out the differences of opinion on the treatment from a clinical standpoint. He spoke of the treatment of the various forms of the disease, paying particular attention to the Ochsner and the operative treatments.

The Relation of Medicine to Surgery.

DR. JAMES E. COLEMAN, Canton, thinks that whereas in former days the surgeon was first and foremost a fine physician, now surgeons neglect medicine. He discussed some avoidable surgical affections of the ovaries.

Leukemia; with Special Consideration of Its X-ray Treatment.

DR. EVERETT J. BROWN, Decatur, gave the history of a case of splenomedullary leukemia, with a greatly enlarged spleen, in which the use of the *x*-ray caused the disappearance of all symptoms. He considered the cases in literature so treated, and presented a summary.

Polyneuritis.

DR. L. HARRISON METTLER, Chicago, stated that multiple neuritis is a much-abused term. The general conception of the disease and the text-book descriptions of it are far too narrow. It is a disease more or less of the entire nervous apparatus. He spoke of the central and peripheral types of the disease; of the relative significance of the interstitial and parenchymatous disease processes. He spoke of the relative importance of the particular etiologic influences, and pointed out the clinical indications of the extensive nature of the disease. Pathologic proofs were advanced. He referred to the differential diagnosis of types of the disease requiring variable treatment.

The Pneumonia Problem.

DR. ARNOLD C. KLEBS, Chicago, spoke of investigations into statistical data regarding this disease, and its increase in the United States and abroad. He made a comparison of non-tuberculous respiratory diseases and tuberculosis, both clinical and statistical. He pointed out the dangers of pneumonia to the individual and to the community, and how they can be met.

DR. CHARLES J. WHALEN, Chicago, gave a comparison of mortalities from pneumonia and tuberculosis. He pointed out the possibility of making headway against the disease from a prophylactic standpoint. Expectant treatment is the most satisfactory, and among other things he mentioned rest, ventilation, sponging, elimination, poultices and glycerin; also the value of antipyretics, serum therapy, venesection, arterial sedatives, oxygen, opium, creosote, normal salt solution, suprarenalin, stimulants, expectorants, etc.

Brain and Sinus Diseases Resulting from Purulent Otitis Media.

DR. A. H. ANDREWS, Chicago, said that the brain and sinus complications are more common than is generally supposed. He stated that pus in the mastoid escapes in one of six directions. The intracranial complications may be general meningitis, extradural abscess, cerebral abscess, cerebellar abscess and sinus disease. He expatiated at length on the symptoms and treatment, followed by a report of cases.

Classifications of Joint Affections.

DR. AUGUST F. LEMKE, Chicago, pointed out the distinguishing features between the joint diseases known as the rheumatic arthritides and the group known as arthritis deformans. He discussed the treatment of some of the more important joint lesions.

Middle Ear Suppuration.

DR. NORVAL H. PIERCE, Chicago, reported additional cases of sigmoid sinus thrombosis from middle ear suppuration.

DR. WILLIS O. NANCE, Chicago, stated that acute otitis media of infancy and early childhood was frequently an unrecognized process. The recent investigations of Ponfick, Barth and others demonstrate that a large proportion of infants and young children at some time suffer from middle ear inflammation. The dangers from non-recognition were pointed out; also the close relationship between acute purulent otitis media and acute infectious processes other than diphtheria and scarlet fever, namely, gastrointestinal disturbances and bronchopneumonia. He mentioned the structural variations between the infant and adult middle ear, and the diverse characteristic manifestations of inflammation in each. Considerable attention was paid to the diagnosis and treatment of acute infantile otitis media.

Corneal Ulcers.

DR. WILLIAM H. WILDER, Chicago, in speaking of infectious ulcers of the cornea, said that the underlying cause is to be sought in impaired vitality of the tissues from a general or local depraved nutrition. The active cause is usually some trauma, which is supplemented by a virulent infection. The source of the infection is frequently in the tear sac. He emphasized the importance of prompt recognition and active treatment. Cauterization of the ulcer plays a prominent rôle in the treatment, as do also constitutional measures.

Cholecystitis.

DR. M. L. HARRIS, Chicago, said that microbes may retain vitality for a very long time in the gall bladder. Cholecystitis is often mistaken for other conditions. He referred to the advantages and necessity of drainage of the gall tract in cholecystitis, and the length of time drainage should be continued.

Kidney Surgery.

DR. ARTHUR DEAN BEVAN, Chicago, gave a brief historical review of this subject, and mentioned the pathologic conditions warranting surgical interference. He likewise mentioned the means of diagnosis, and in discussing the surgical treatment, referred to nephrorrhaphy, nephrotomy, nephrolithotomy, nephrectomy, and plastics on the kidneys and ureters. Attention was directed to the prognosis after kidney operations.

Subcutaneous Injuries of the Abdominal Wall and Viscera.

DR. D. N. EISENDRATH, Chicago, said that many lives might be saved by prompt recognition of serious injuries of the abdominal viscera in which there is only slight injury of the skin. He alluded to the greater amount of protection of certain organs; discussed the manner in which injuries occur, and the mode of examination for the purpose of making a diagnosis. He reported a number of cases, analyzed statistics and drew deductions therefrom.

(To be continued.)

ASSOCIATION OF AMERICAN PHYSICIANS.

Nineteenth Annual Meeting, held at Washington, D. C., May 10 and 11, 1904.

The President, Dr. W. T. Councilman, in the Chair.

(Continued from page 1378.)

Abdominal Pain from Unsuspected Irritation of the Internal Inguinal Ring.

DR. CHARLES G. STOCKTON, Buffalo, read a paper on the first day, afternoon. He reported 12 cases of abdominal pain which was due to irritation at the internal abdominal ring. These were not cases of hernia as commonly understood, but of very slight protrusion at this ring, sufficient to produce quite severe pain, sometimes in paroxysmal attacks and sometimes constant in character. The attacks are to be differentiated from appendicitis and may be relieved by the application of a truss.

DISCUSSION.

DR. CHARLES CAREY, Buffalo, referred to a case in which the merest trace of a hernial sac at the internal abdominal ring produced pain of serious character. The condition was confirmed by an operation.

DR. GEORGE L. PEABODY, New York City, referred to a similar case in which the symptoms were relieved by the application of a truss.

DR. CHARLES S. BOND, Richmond, Ind., referred to a case of like character in which a truss relieved the pain.

DR. GEORGE DOCK, Ann Arbor, said that abdominal pain is often felt at a point far removed from the seat of the disease. He spoke of a case in which there was swelling in the right inguinal region, produced by a small hernia, in which the attacks of pain had been like those of gallstone colic. After an operation for the relief of the hernia, during which the gall-bladder region was examined and found healthy, the attacks of pain ceased.

DR. STOCKTON emphasized the point that the cases included in his report were caused by mere bulging at the internal ring and not by the formation of a true hernial sac. All the patients were relieved by the application of suitable trusses.

The Mechanism of Exophthalmos.

DRS. W. G. MACCALLUM and W. B. CORNELL, Baltimore, described experiments designed to discover the cause of exophthalmos and an instrument for recording in a graphic manner the degree of protrusion of the eyeball after various manipulations. They find that both respiration and the pulsation of the heart produce some change in the degree of protrusion of the eyeball when a graphic record is made. If the internal jugular vein be ligated there is slight protrusion of the eye, but a more marked protrusion is produced if the external jugular be ligated. Ligation of the carotid arteries lessens this protrusion slightly. The protrusion thus produced is relieved by the establishment of the collateral venous circulation, although the development of edema in the orbital tissues tends to maintain the condition to some degree. In the dog stimulation of the cervical sympathetic nerve produces protrusion of the eyeball, dilation of the pupil and widening of the palpebral fissure, independent of any change in the blood vessels. The actual cause of the protrusion is the peristaltic contraction of a cone of tissue containing smooth muscle fibers which surrounds the eyeball. In the human subject stimulation of the cervical sympathetic does not cause exophthalmos, so that no parallel can be drawn between these experiments and Graves' disease.

Diabetes Insipidus.

DR. THOMAS B. FUTCHER, Baltimore, reported a study of 9 cases of diabetes insipidus from the Johns Hopkins Hospital, showing the rarity of the condition. He classifies the disease into a primary or essential group and a secondary or symptomatic group. The disease is usually found between the ages of 20 and 30. Many of the patients presented a history of gout, nephritis or tuberculosis in their ancestors; heredity is a marked factor in some cases. The disease is more prevalent among males than among females. Some lesion of the brain is the most common pathologic finding. Syphilis was an important etiologic factor in 4 out of the 9 cases; the most common form of syphilitic lesion was a basilar gummatous meningitis.

DISCUSSION.

DR. BAUMGARTEN, St. Louis, referred to a case of diabetes insipidus which developed into true diabetes mellitus.

DR. W H. THOMSON, New York City, referred to two cases of diabetes insipidus, neither of which showed signs of syphilis.

DR. JAMES TYSON, Philadelphia, said that he had seen 6 or 7 cases in his experience. Potassium iodid is the most satisfactory drug in the treatment of the condition. The father of one of his patients was thought to have been syphilitic.

DR. GEORGE DOCK, Ann Arbor, said that some cases of this condition seem to be hopeless. He recalled one case that followed an attack of hemiplegia in which mercury and the iodids had no effect.

DR. ABRAHAM JACOBI, New York City, said that the condition is common in infancy and childhood. The condition develops after anemia, chorea, whooping cough, falls on the occiput and some of them seem to be connected with tumors. Atropin gave good results in the cases he has seen in children.

DR. FUTCHER said that he had seen one case that followed typhoid fever. He does not wish to be understood as believing that syphilis is the only cause of the condition.

A Case of Prolonged Male Hysteria with Autopsy.

DRS. S. WEIR MITCHELL and WILLIAM G. SPILLER, Philadelphia, read this paper. The patient was a man who had had uncomplicated hysteria for 30 years. He died suddenly and a postmortem examination gave only negative results.

DR. MORTON PRINCE, Boston, said that, according to the modern view, hysteria depends on the dissociation of cerebral centers and on the automatic action of the dissociated centers. Experiment has shown that in hysterical anesthesia there is no anesthesia, but that the sensory centers fail to act because they are not associated.

DR. HORATIO C. WOOD, Philadelphia, said that the periodic movements of the hysterical patient belong to the category of involuntary movement and since there is no sense of fatigue no record is left on the brain cells in the area governing the voluntary movements of the parts.

Some Unusual Forms of Acute Myelitis.

DR. B. SACHS, New York City, referred to other forms of acute myelitis than those due to syphilis, trauma and the infectious diseases. The condition appears to be a general degeneration of the spinal cord from interference with its blood supply. He reported the case of a man, aged 65 years, who had the symptoms of transverse myelitis. At autopsy a simple degeneration of the spinal cord without hemorrhage was found, the blood vessels being arteriosclerotic. In the case of a girl, aged 15 years, who suddenly became unconscious and developed paraplegia with involuntary micturition and defecation, a diagnosis of acute transverse myelitis was made. The patient had high fever and developed multiple abscesses, from the pus of which streptococci were obtained. In spite of two attacks of erysipelas the patient did not die and is now a chronic paraplegic. He likens the cases to certain cases of encephalitis due to circulatory disturbance without hemorrhage.

Infectious Neuritis.

DR. JAMES J. PUTNAM, Boston, reported cases showing the same infectious agent may act on the nervous system in different ways at different times. The clinical and the pathologic pictures are often confused.

DISCUSSION.

DR. WILLIAM H. WELCH, Baltimore, said that the spinal cord is very sensitive to partial anemia, a primary ischemic necrosis resulting, which is not, strictly speaking, a myelitis. It is possible by compressing the aorta of a rabbit for an hour to produce a transverse myelitis. He regards the case reported by Sachs as of this type. It is often difficult to demonstrate the source of the anemia.

DR. SACHS said, in answer to a question by Dr. William H. Park, New York City, that he did not do a lumbar puncture in the girl because he considered it important not to withdraw any of the septic material from the cord into the subarachnoid space.

Cerebrospinal Fever.

DR. HENRY KOPLIK, New York City, read a paper entitled "The Clinical Features, Prognosis and Treatment of Cerebrospinal Meningitis in Infants and Children." He studied 49 cases of cerebrospinal meningitis, which he divides into three classes: (1) a malignant type, characterized by sudden illness with the development of an erythematous rash followed by hemorrhages; (2) a chronic type, like the adult cases, and (3) a group of atypical cases. The Babinski reflex was absent in the majority of cases, but was present in about 5 per cent. In tuberculous meningitis; on the other hand, this reflex is present in 77 per cent. of cases. It is, therefore, an adjunct to the differentiation of the diseases. Kernig's sign is usually positive in cerebrospinal meningitis. It is of little value, however, in children below 2 years old. The temperature in young children is intermittent, so that the chronic cases are sometimes taken for malaria. There is usually no change in the fundus of the eye in cases of cerebrospinal meningitis; in only one out of 21 cases was there a descending neuritis; just the reverse of the condition seen in tuberculous meningitis. There is usually a leucocytosis, the highest being 24,000. The prognosis does not seem to be affected by the degree of the leucocytosis.

When a lumbar puncture obtained fluid, the *Diplococcus intracellularis* was usually found. In some of the cases of the type described by Still no diplococci were found, but there is no support of the view that the cases of the Still type are tuberculous. Lumbar puncture is not curative; it does not prevent relapses and it does not prevent the development of severe symptoms. It is indicated in infants and young children and is curative in those cases in which the development of hydrocephalus is to be expected. Injection of fluid into the subarachnoid space was found unsatisfactory therapeutically.

Esophageal Stricture.

DRS. JAMES TYSON, EDWARD MARTIN and JOSEPH EVANS read a paper entitled "Two Cases of Spasmodic Stricture of the Esophagus with Sacculation Treated by Dilation and Later by Gastrostomy." The first patient was a man, aged 33 years, who had had dysphagia since he was 12 years old. He came of a tuberculous and neurotic family and was himself of a neurotic temperament and an irregular liver. He was able to overcome the spasm at the cardiac end of the stomach after eating by drinking large quantities of fluid and swallowing forcibly many times. By potassium iodid and salol it was shown that there was no passage of food into the stomach when it was not forced in in the way just described. When food was forced into the stomach the motor power of the organ and the absorption were found normal. The patient had a right floating kidney, gastroptosis and a slow pulse. The second patient was a woman, aged 33 years, who first felt a choking sensation behind the sternum two years ago. The attacks of choking increased so that only fluids could be swallowed, solid food being regurgitated. She became weak, emaciated and nervous. Martin first tried to dilate and paralyze the esophageal opening into the stomach by having the patient swallow an instrument, devised by himself, constructed like an urethral dilator, which was opened and withdrawn. This gave some improvement for a time, but soon the condition returned as bad as before. A gastrostomy was then done and the patient is now being fed through the wound.

Idiopathic Dilation of the Esophagus; Cardiospasm.

DR. BERTRAM W. SIPPY, Chicago, reported the case of a woman, aged 37, who had complained of dysphagia and vomiting for five years. She was thought to be hysterical. She lost weight and, after a diagnosis of pyloric obstruction, gastroenterostomy was performed. Following the operation there was less pain, but the patient did not gain in weight and soon the old symptoms returned. A gastrostomy was done, but the patient became weaker and died in a toxic condition. The specimen was exhibited. The esophagus held 500 c.c.; there was no anatomic stricture; the lower inch of the tube was not dilated; the wall of the dilated portion was hypertrophied. There was no pyloric obstruction.

DISCUSSION.

DR. FRANCIS P. KINNICUTT, New York City, exhibited a specimen from a patient who died of the same condition. The esophagus held 1,800 c.c. There was no anatomic cause for the obstruction. The stomach was dilated and dislocated; the pylorus was moderately stenosed. The patient had suffered from dysphagia and regurgitation for 20 years. He died of inanition.

DR. E. G. JANEWAY, New York City, showed the skiagraph from a patient who had had dysphagia with hemoptysis for 20 years. Some food was regurgitated with the blood, which led to the exclusion of tuberculosis and the discovery of the dilated esophagus, which held from 500 to 800 c.c. A test meal withdrawn from the esophagus showed a moderate amount of lactic acid acidity. A test meal withdrawn from the stomach showed the presence of free hydrochloric acid and peptones. He also referred to the case of a girl who, since infancy, has been able to retain 10 ounces of fluid in her esophagus. By percussion in this case he was able to get dullness along the vertebral column when the esophagus is distended with food and tympany when it is empty. He said that Dr. S. J. Meltzer, New York City, was the first to describe these cases and to explain the mechanism of their production in 1888.

(To be continued.)

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Cold Abscess.

The treatment of cold abscesses, according to Prof. Lannelongue in *Med. Press*, should be at first directed toward the general condition of the patient. Sea air, nourishing food and cod-liver oil are of service. Locally the best treatment is tapping, followed by an antiseptic injection. Different liquids have been employed by the author, such as tincture of iodin, zinc chlorid, silver chlorid, camphorated naphthol and iodoform in ether. The last two are preferably used. Before tapping the abscess the parts should be washed with soap and water and finally with alcohol. The point at which the trocar is inserted is of importance; it should be selected a little beyond the limits of the abscess so that before penetrating into the cavity the instrument should pass through healthy tissue. This point should be situated at the highest part of the abscess, and not in the lowest, as in ordinary inflammatory suppurations. In observing these precautions a secondary fistula may be avoided. After anesthetizing the point chosen with chlorid of ethyl or a solution of cocain (1-100) the trocar is inserted slowly until the cavity is reached, when it is withdrawn, leaving the canula. After the cavity has been drained the antiseptic fluid should be injected. It must be remembered, if camphor naphthol is used, that it is not an inoffensive preparation, and accidents may happen. The dose should not exceed half a dram (1.00).

If iodoform in ether is used, one dram (4.00) may be injected slowly to avoid pain, and after the ether has evaporated the powdered iodoform remains in the cavity, when a small piece of sterilized gauze may be inserted and held in position by collodion.

Vesicular Eruptions.

Bazin, in an abstract in *N. Y. and Phila. Med. Jour.*, recommends the following combinations containing mercury sub sulphate in the treatment of vesicular eruptions:

℞.	Hydrarg. subsulph.	ʒss	2
	Olei amygdalæ dulcis	ʒiiss	10
	Adipis	ʒii	60
M.	Ft. unguentum. Sig.: To be applied locally; or:		
℞.	Hydrarg. subsulph. (Turpeth mineral)	gr. xv	1
	Glycerini		
	Olei amygdalæ dulcis, āā	ʒi	4
	Adipis	ʒiss	45
M.	Ft. unguentum. Sig.: Apply locally.		

Scabies in Children.

The following combinations are recommended by *Jour. des Pract.* in the treatment of scabies in children:

℞.	Sulphuris precip.	ʒi	4
	Potass. carb.	ʒss	2
	Olei amygdalæ		
	Aq. destil., āā	ʒss	2
	Adipis	ʒvi	24
M.	Ft. unguentum. Sig.: Apply locally.		

To soothe the skin previous to applying the foregoing ointment the following is of service applied locally:

℞.	Zinci oxidi		
	Amyli, āā	ʒv	20
	Liq. petrolati	ʒx	40
M.	Sig.: Apply morning and evening.		

Tonsillitis.

J. Scott Brown, in *Med. News*, considers a large percentage of the cases of chronic tonsillitis to be of rheumatic origin.

He treats locally and internally with the tincture of the chlorid of iron and locally also with formalin and iodin sprays, keeping the nasal passages cleansed out with Dobell's solution employed in the form of a douche. In acute cases he administers calomel in broken doses until the desired effect is produced, after which a tablet containing the following ingredients are administered:

R.	Tinct. aconiti rad.	gtt. 1/5	012
	Tinct. bryoniæ		
	Tinct. belladonnæ, āā	gtt. 1/10	006
	Hydrarg. iodidi rubri	gr. 1/100	0006

M. Ft. tabla No. i. Sig.: One such tablet every hour to an adult until eight are given.

Alternating with the foregoing quinin is given in one grain doses for eight doses.

As a spray the following is recommended by the author:

R.	Formalin (40 per cent.)	m. iii	20
	Glycerini	ʒii	8
	Aquæ q. s. ad	ʒi	30

M. Sig.: As a spray three times a day; and:

R.	Formalin	gtt. iii	20
	Glycerini	ʒvi	24

M. et add:

	Tinct. iodi	gtt. xx	1 30

M. et add:

	Alcoholis	ʒiv	15
	Aquæ q. s. ad	ʒiv	120

M. Sig.: To be used as a spray following immediately the first spray.

As a gargle a solution of alcohol in water in the desired proportions may be employed three or four times daily, increasing or decreasing the amount of alcohol as is indicated in the individual case.

The Care of Children's Teeth.

As a mouth wash to prevent the decay of teeth the following combination is recommended by *Western Druggist:*

R.	Acidi tannici	ʒii	8
	Tinct. iodi	ʒi	4
	Pot. iodidi	gr. xv	1
	Tinct. myrrhæ	gtt. lxxx	5
	Aquæ rosæ q. s. ad	ʒvi	180

M. Sig.: Rinse the mouth thoroughly with this solution two or three times daily to prevent the decomposition of food particles and consequent caries of the teeth.

In cases where it is thought desirable to attempt to counteract a tendency toward loosening of the teeth the following mouth wash is recommended:

R.	Acidi benzoici	gr. x	65
	Thymol	gr. i	06
	Acidi salicylici	gr. v	30
	Tinct. eucalyptus	gtt. xlv	3
	Aquæ q. s.	ʒvi	180

M. Sig.: One teaspoonful in water to rinse the mouth every two or three hours.

The teeth should be cleansed at least once daily after the last meal, using at the time a little tooth powder or a little soap or precipitated chalk, after which the mouth should be thoroughly rinsed.

To Purify the Sick Room.

The following antiseptic combination is recommended as a vapor in the sick room:

R.	Eucalyptol	ʒiiss	10
	Olei thymi		
	Olei limonis		
	Olei lavendulæ flor., āā	ʒi	4
	Alcoholis	ʒiv	120

M. Sig.: One teaspoonful to be floated on a pint of boiling water and allowed to evaporate.

Hepatic Colic.

According to an abstract in *Amer. Jour. of Med. Sciences,* the indications to be met in the treatment of hepatic colic is to relieve the pain; to facilitate as much as possible the passage of the calculus; to prevent complications. The pain may be relieved by the hypodermic use of morphin and atropin, guarding the use of the latter preparation when there is a tendency to collapse. To patients who do not bear morphin well, chloroform may be given to the obstetrical degree, or if there is no vomiting the following combination:

R.	Chloralis	ʒss	2
	Syr. menth. pip.	ʒi	30
	Aq. chloroformi	ʒiii	90

M. Sig.: Two dessertspoonfuls every fifteen minutes until relieved. When the stomach is too irritable the chloral may be given per rectum as follows:

R.	Chloralis	ʒss-i	2.-4
	Aq. bullientis	ʒiiss	10

M. et add:

	Ovi vitelli (one)		
	Vini opii	m. xv	1
	Lactis	ʒvi	180

M. Sig.: To be used as an enema.

Ether and turpentine on the one hand and olive oil and glycerin on the other, are the usual remedies employed to facilitate the passage of the stone. The latter are more frequently employed. To overcome the disagreeable taste of the olive oil, it may be stirred up with a little ale or to it may be added a little menthol or a few drops of the essence of bitter almonds or anise. The quantity of the oil should range from four to eight ounces. Glycerin is more pleasant to take, but less effective. Hot water bags applied externally are of great value in relieving the spasm of the duct.

Disturbance in the circulation and heart failure is the chief complication of hepatic colic. To combat it, it is recommended that spartein be substituted for the atropin. Chloral should not be given where collapse is threatened and in case such should occur hypodermic injections of camphor are recommended. To prevent accidents to the biliary passages the use of purgatives should be avoided and all food suspended until the pain has ceased for several hours. Surgical interference, of course, is imperative if rupture of the bile passages occurs.

Hyperchlorhydria.

The mechanical difficulty some patients experience in taking magnesia, bismuth or charcoal in the powder form is appreciated by R. M. Harbin of Rome, Ga., who writes to THE JOURNAL and recommends the following serviceable mixture in the treatment of hyperchlorhydria:

R.	Strontii bromidi	ʒiss	6
	Carbo ligni	ʒi	4
	Bismuthi subnit.	ʒiv	15
	Lactis magnesiæ	ʒiii	90
	Aq. menth. pip. q. s. ad	ʒvi	180

M. Sig.: Shake and take one tablespoonful one hour after meals.

If an antiferment is indicated the mild chlorid of mercury should be given in divided doses.

Medicolegal.

When Is the Question as to Injuries One for Experts Only?—The Supreme Court of Oklahoma holds, in Willet vs. Johnson, a personal-injury case, that, where the injuries are of such a character as to require skilled and professional men to determine the cause and extent thereof, the question is one of science, and must necessarily be determined by the testimony of skilled professional persons, and can not be determined from the testimony of unskilled witnesses having no scientific knowledge of such injuries.

The Weighing of Dying Declarations.—The Court of Appeals of Kentucky says, in the homicide case of Commonwealth vs. Lawson, that it fully recognizes that the question of the admission of dying declarations is primarily for the determination of the court, but this only relates to the question of the admissibility of the evidence; in other words, whether or not the condition of the decedent's mind, with reference to his death, is such as that the awfulness of his situation will supply the sanctity of an oath. After the testimony is in, the weight that is to be given it, either in part or in whole, is for the determination of the jury. The defense may impeach the credibility of the declarant, may show that he made a different

statement to that contained in the declaration, or that the declaration is untrue in fact; but, after all, the question as to whether or not the declarant made the declaration as testified to, or whether it is true in whole or in part, or whether he made a declaration at all, are issues for the determination of the jury, and not for the court.

Scope of Prosecution for Unlawfully Practicing Medicine.—In Payne vs. State, where it was charged, among other things, that the former did unlawfully practice medicine without a license, the Supreme Court of Tennessee says that, while it is true that in certain misdemeanor cases testimony may be introduced tending to show numerous infractions of the law, falling within the period of limitation, although there be only one count or charge in the indictment or presentment, and true that in such cases the court, on application of the defendant, will compel the state to elect the particular offense or instance on which it will ask a conviction at the hands of the jury, yet the court does not think the rule applies to a case such as this one. Here the defendant (Payne) was indicted for practicing medicine without a license. The term "practicing," in respect of the subject in connection with which it is used, indicates the pursuit of a business. The fact that the defendant was pursuing such business may be proven in some cases, no doubt, by a single act, where that act is clear and definite, and is so supported by other circumstances as to indicate that he was indeed pursuing the business in question; but in all cases it is far more satisfactory that a series of acts of a similar nature be proven, all tending to show that the defendant was engaged in the forbidden occupation, to the end that the jury may be enabled to determine from the defendant's course of conduct whether he is guilty of the charge. In other words, under such a charge, each several instance of advising patients, prescribing for them, or administering medicine to them is not necessarily an offense, but these facts all taken together, when considered in connection with the further fact that the defendant had no license to practice, go to prove the charge of practicing without license. It is no more difficult for the jury to examine and draw conclusions from such a series of facts than from any other series tending to support a general proposition, nor is it more difficult for the defendant and his counsel to prepare the defense and present it to the jury. Nor can any inconvenience or hardship arise in pleading former acquittal or former conviction, as the case may be, in event there should be a subsequent prosecution. Necessarily, from the very nature of the case, an indictment for unlawfully practicing medicine would cover all special instances occurring prior to the indictment or presentment in the particular venue or county, and going to sustain the main charge; hence a former acquittal or conviction could be pleaded in bar of any subsequent prosecution based on such prior acts.

Proof of Claim—Physician's Visiting List as Evidence.—The Nebraska case of Cather vs. Damerell, which is "not to be officially reported," but is reported in 96 Northwestern Reporter, 35, was brought by the latter party, a practicing physician and surgeon, against an administrator to recover a balance due on an account for professional services rendered the decedent and his wife. The first contention of the administrator was that the claimant neither alleged nor proved that he had complied with the provisions of the statute regulating the practice of medicine. But the Supreme Court Commissioners of Nebraska say that he alleged that at the time the services were rendered he was a regular, practicing physician, and this allegation was fully sustained by the evidence. He could not have been practicing lawfully without a compliance with the provisions of the act in question, and the law raised no presumption that he practiced unlawfully. The rule seems to be that when the question of license arises collaterally, in a civil action between a physician and one who employs him, his qualification under the statute will be presumed, and the burden is on him who denies such license. Lacy vs. Kossuth County, 106 Iowa, 16; Lyford vs. Martin (Minn.) 82 N. W. Rep. 479; City of Chicago vs. Wood, 24 Ill., App. 40. Another contention of the administrator was that the court erred in receiving a certain account book of the claimant in evidence. The books received in evidence were shown to be what is known as a "physician's visiting list." The pages are ruled in such a way as to leave a space at the top for the year, month and day of the week, and for special memoranda in separate columns. In the column headed with the year and month is the name of the patient. In this particular case the account was shown to have been kept by placing a dot for each visit, and a cross for each local application, opposite the patient's name, in the column headed the day of the week on which the services were rendered. The credits were entered in the column for special memoranda. One complaint in regard to the books was in regard to the arbitrary signs used to indicate the services rendered. This complaint, the commissioners say, was without merit. The law does not require an account to be kept in any particular language. A notched stick, pieces of board sawed out of a corncrib, and boards on which the measurement of lumber were kept, have all been held good books of original entry, and receivable in evidence. Rowland vs. Barton, 2 Har. (Del.) 288; Pallman vs. Smith, 135 Pa. 188. In the light of these cases, the system of bookkeeping adopted by the claimant in this case was by no means crude. As a matter of fact, it appeared to be a very convenient and simple one. But it was insisted that no sufficient foundation was laid for the admission of the books in evidence. The reception of books of account in evidence is regulated by section 346 of the Nebraska Code of Civil Procedure, which is as follows: "Books of account, containing charges by one party against the other, made in the ordinary course of business, are receivable in evidence only under the following circumstances, subject to all just exceptions as to their credibility: First, the books must show a continuous dealing with persons generally, or several items of charges at different times against the other party in the same book; second, it must be shown, by the party's oath or otherwise, that they are his books of original entries; third, it must be shown, in like manner, that the charges were made at or near the time of the transaction therein entered, unless satisfactory reasons appear for not making such proof; fourth, the charges must also be verified by the party or the clerk who made the entries to the effect that they believe them just and true, or a sufficient reason must be given why the verification is not made." The wife of the claimant was called as a witness to make the preliminary proof for the introduction of the books in evidence. She had been the wife of the claimant for nineteen years, and showed herself familiar with his business and bookkeeping, as well as a familiarity with his accounts. She testified that the books were his books of original entry. She also testified to the meaning to be given the arbitrary signs therein, in such a way as to make the book easily understood. The value of the services shown by the books was established by the evidence. The books, on their face, showed numerous items of charges at different times against the decedent. The evidence was not entirely satisfactory that the charges were made at or near the time of the transactions therein entered, and there was no evidence on the part of the claimant, who made the entries, that he believed them just and true. But he was incompetent (ground not stated) as a witness to prove such facts, and that would be sufficient reason, within the meaning of the section quoted, for the failure to make such proof. Martin vs. Scott, 12 Neb. 42. It would seem that the claimant brought himself clearly within the statute prescribing the conditions on which books of account may be received in evidence, and that the court did not err in receiving such evidence. The Supreme Court of Nebraska proves the conclusions reached by the commissioners.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

May 14.

1 *Carcinoma of the Esophagus. W. M. L. Coplin.
2 *Is the Epileptic Attack Explosive in Character? J. W. Wherry.

3 *A Contribution to the Physiologic Study of the Normoblasts. Julio F. Arteaga.
4 *The Puerpera: Her Care and Comfort During Convalescence, Particularly the Prevention of Visceral Prolapse. A. Ernest Gallant.
5 *Further Experiences with Intratracheal Medication. P. S. Donnellan.
6 The Correct Technic for Packing the Urethra, in Gonorrhea, Gleet and Stricture; Two New Instruments. S. T. Rucker.

1. **Carcinoma of the Esophagus.**—Coplin discusses the frequency and types of the condition and reviews the special points of its occurrence in the literature. He agrees with Pepper's statement that metastasis is less frequent than in carcinoma of the other organs, excluding only some feebly malignant epitheliomas of the skin. Gastrostomy seems to be the most favorable surgical procedure. The experiments with radium by Exner have not positively demonstrated any valuable results.

2. **Epilepsy.**—Wherry argues against the practice of considering the convulsion the chief and essential symptom in epilepsy, claiming that unconsciousness and its varying form of approach is of more significance. He thinks it is due to vasomotor spasm, which is itself probably a portion of the general tonic convulsion, and the theory of asphyxia is fortified in his opinion. Locking up the oxygen in the form of methemoglobin being the primary trouble and the cause of both the convulsions and unconsciousness, he thinks that back of the epileptic attack is a toxic condition and that investigation should not be devoted so exclusively to convulsions in the future as in the past.

3. **The Normoblasts.**—Arteaga holds that nucleated red blood corpuscles are the ancestors of the non-nucleated red blood cells and occur in larger quantities in embryonic life and that the spleen and bone marrow are constantly producing normoblasts, but this is only made evident to the eye when there is considerable loss of red cells, as in anemic conditions. The nucleus during extra-uterine life is less resistant and more short lived than during embryonic life, and that when the red blood cell leaves the marrow or spleen it loses the nucleus as a rule. He tabulates the results of his studies on dogs, cats and human beings, indicating the age, the time between autopsy and fixation, formula used and the results.

4. **The Puerperium.**—Gallant thinks many of the evils from which women suffer are due to uterine displacements from faulty posture after labor. They should not be allowed to lie on the back, but on the abdomen or side. It has been his custom to elevate the cervix by tamponing the vagina with sterile gauze tampons, changed every twenty-four or forty-eight hours, until the uterus has returned to its normal size and maintains its normal position. If it is abnormal before pregnancy this is the method to bring about normal conditions, but it would be advisable after using the tampon for a few weeks to insert a well-fitting pessary. He would not keep the patient in bed too long, as it encourages muscle weakness. The earlier out of bed the less weakness and the sooner the regaining of her former strength. Over-distension of the abdomen he meets by means of a properly applied binder and a specially fitted corset put on in the horizontal position and worn continuously when not lying down.

5. **Intratracheal Medication.**—Donnellan describes the syringe and canula which he used in intratracheal medication. The syringe is glass with an asbestos plunger; there is attached by a screw thread a nickel-plated canula bent at a right angle, with an olive-pointed closed tip, with four fine lateral openings near the end. The whole instrument can be readily sterilized by boiling. He first anesthetizes the larynx with a 4 per cent. cocain solution and then charges the syringe with a solution previously heated at about 102 F., two drams being the amount employed. The patient is instructed to protrude the tongue and hold the tip in a napkin, while the operator, guided by the laryngeal mirror, inserts the tip of the canula between the cords and while the patient takes a deep inspiration, slowly discharges the injection into the trachea. Care should be taken that it is given only during inspiration and that the tip of the canula is not allowed to touch the fauces, the base of the tongue or the epiglottis. If these details are faithfully carried out there are no unpleasant after-effects. The vehicles he has found most satisfactory for the injections are any of the fluid petroleum oils, olive oil and distilled glycerin. The medicaments found to be most serviceable are creosote, menthol, guaiacol, camphor or chloretone in 1 to 4 per cent. solution either singly or in combination, and other drugs added according to indications. Six cases are reported.

Medical Record, New York.

May 14.

7 *Some Characteristics of Stegomyia Fasciata Which Affect Its Conveyance of Yellow Fever. H. R. Carter.
8 *The Unclassified Troubles of Women. Eugene Coleman Savidge.
9 *A Diagnostic Syndrome for Intracranial Syphilis. With Remarks on Prognosis and Treatment. Wm. Broaddus Pritchard.
10 *Claudius' Catgut. A New and Effective Method for Its Sterilization. Alexis V. Moschcovitz.
11 Case of Hodgkin's Disease Treated by X-rays. Edward B. Finch.
12 *Local Applications in Pneumonia. W. F. Church.

7. **Stegomyia Fasciata.**—Among the special characteristics of the stegomyia which affect its rôle as a carrier of yellow fever are, according to Carter:

1. *Its Distribution.*—This is generally between Lats. 43 N. and 43 S. on the coasts and low plains of Africa, Asia, and the adjacent islands; Australia and the Mediterranean basin of Europe. It is also general on the eastern coast of America from 38 N. to 35 S. Lat. On the west coast it is found at Panama and Guayaquil, and its existence is implied from Guayaquil to Acapulco. In the United States it is general on the coast and low plains of the Southern States, except Maryland.

2. It is conveyed by vessels indefinite distances (from Cape Town to Savannah Quarantine); in much greater numbers and more often by sail than by steam vessels.

3. It lives a long time—154 days being recorded of an infected insect. Once having acquired the power of transmitting yellow fever, it retains it apparently as long as it lives—59 days being recorded. A consideration of the three postulates above will render it advisable to safeguard the tropical countries of the East when communication is opened up between them and American ports infected with yellow fever, preferably by freeing the American ports of yellow fever.

4. It propagates preferably in artificial containers, but will propagate in pools where such containers are not available.

5. In America it has been reported only in the vicinity of human dwellings, and seems here not to be a sylvan, paludal or campestral mosquito. From 4 and 5 the war against this insect in America should be waged about the houses of men, and especially against water in artificial containers. The introduction of a water supply, piped to every house so as to do away with cisterns and water-jars, is the most important measure of sanitary engineering to free a town of this mosquito. Next to this is a system of drainage by covered drains to carry off the rain water and prevent pools. Cesspools are not objectionable on this score.

6. It unquestionably hibernates in the United States, but if the infected adult hibernates, either a very large proportion of them die, or else the infecting parasite must generally die in the hibernating mosquito. The first seems more probable.

7. It is essentially a house mosquito, and is inclined to stay about the premises where it has fed. Hence, the greater safety of the whole district of an infected city as compared with the residence portion.

8. It does not feed in the dark or in bright sunlight. Therefore, in bright daylight or at night without artificial light are the safest times to be in an infected place.

9. The cycle of the yellow fever parasite in the mosquito before it can be conveyed to man is generally in hot weather, about fourteen days or over. Prior to the accomplishment of this cycle (once called the "extrinsic incubation of yellow fever") the mosquito can not convey this disease.

10. It is probably usually conveyed aërially less than 100 yards. In Havana the infected insect is believed to be never aërially conveyed 200 fathoms—1,200 feet—from Havana shore. The direction of the prevailing wind during the day influences its aërial conveyance.

8. **The Unclassified Troubles of Women.**—These are, according to Savidge, largely those relating to what he calls the self-obliterated feminine element, the decline of the reproductive period and the maladjusted sexual relations, the psychology of the menopause and the danger at that period of women becoming uric acid machines and subjects of arteriosclerosis which tends to early aging and physical degeneration.

9. **Intracranial Syphilis.**—Pritchard lays down the following principles which he has learned to rely on during the past fifteen years. He says:

Given a patient between the ages of 25 and 45, affected with any form of intracranial paralysis, which was preceded by headaches, of nocturnal onset or exacerbation, associated with vertigo and with insomnia, the insomnia occurring during the first half of the night, the paralysis developing during sleep, both headache and insomnia disappearing on the onset of the paralysis; the cause is syphilis.

We should not adhere to these limits too literally. A reasonable range of variation should be allowed, but in the main he claims that this is the very index of syphilitic involvement of the nerve centers. Other presumably familiar signs are mentioned, such as erratic distribution of the paralysis, tem-

porary palsies and paresthesias, and the preference of syphilis for certain regions and tissues, etc., is noted. The prognosis he considers in the majority of cases somewhat uncertain; that is to say, the prognosis can not be predicted with any certainty in advance of at least some initial response, or lack of it, to specific treatment. He believes in the iodids in the majority of cases. The nearer the primary condition the more useful mercury will be. There is no such thing as a fixed dosage of the iodids. When indicated he would give them not with iodism as a guide, but until the disease yields or the use of very large doses satisfies him that medication is useless. He has seen iodism from continuous 20-grain doses disappear at 40 or 50 grains and has repeatedly given 600 grains or more daily without special inconvenience.

10. **Claudius' Catgut.**—Moschcowitz advocates the use of Claudius' method of preparing catgut by immersing it in a solution of iodin 1 part, iodid of potassium 1 part, distilled water 100 parts, for eight days. The solution should be a very dark brown color or almost black and the catgut take the same color. He finds that it is flexible, knots well and that there is no danger of producing iodism or irritating action from it. The only valid objection that he finds is the action of the iodin on metallic instruments if it is kept in an instrument cabinet, but this objection is readily obviated.

12. **Local Applications in Pneumonia.**—Church finds local applications in pneumonia chiefly valuable for the relief of pleuritic pain and they should be selected, therefore, according to the relief afforded to the patient. When the pain is relieved the use of the application is ended and it should be discontinued. Cold compresses may possibly be of some value in selected cases.

New York Medical Journal.

May 14.

13 *Vasomotor Center in Inhibition of the Heart. (To be concluded.) Charles E. D. Sajous.
14 Intussusception. John F. Erdmann.
15 *Prostatic Crisis. Samuel H. Friend.
16 Mucous Colitis, with Special Reference to Treatment. F. J. Runyon.
17 *Experimental Researches on Resuscitation After Death from Chloroform. (Concluded.) Robert Coleman Kemp and A. W. Gardner.
18 Diagnosis of Smallpox in the Papular Stage. (Concluded.) William Flegenheimer, R. Byington, J. M. Mason and George E. Hoffman.

13. **Inhibition of the Heart.**—Sajous' study of the subject warrants him, he thinks, to offer the following conclusions:

1. Inhibition of the heart is not caused by impulses transmitted to this organ by the vagus or spinal accessory nerves *per se*.
2. Inhibition is due to deficiency of blood in the walls of the heart, due in turn to narrowing of the coronary arteries.
3. The vagus contains vasoconstrictor fibers which terminate on, and cause narrowing of, the coronary arteries.
4. The bulbar vasomotor center is the source of the cardioinhibitory impulses transmitted to the heart by the vasoconstrictor fibers in the vagal trunk.
5. The cardioinhibitory impulses of the vasomotor center leave the bulb by vasoconstrictor fibers in the uppermost root of the spinal accessory, enter the ganglion of the root of the vagus and pass down the vagal trunk to the coronaries.
6. Reflex inhibition of the heart can be caused by vagal stimulation of the vasomotor center.
7. In reflex inhibition the afferent (sensory) impulses enter the bulb by the roots of the vagus and reach its nuclei; these in turn excite the adjoining vasomotor center; the inhibitory impulses of this center then pass to the heart by the efferent path described in the fifth deduction.

15. **Prostatic Crisis.**—The object of Friend's paper, as stated, is to show that one of the early symptoms of tabes, the perineal pain, is located in the prostate gland. In order to find out the seat of the pain he instructed his patients to: 1. Make pressure from over the perineum to ascertain whether the perineum was soft and whether they could determine any tenderness. 2. To palpate the rectum and feel whether there was a tenseness of the rectal sphincter. 3. To palpate with the finger up the rectum, to find the point of greatest tenderness. After each crisis the patients reported that the tissues of the perineum were yielding and not tender, that the rectum was soft and that they had no pain on inserting the finger up the rectum and that the point of tenderness was situated up the rectum in the anterior wall at a point corresponding to the prostate gland. They had no spasm of the muscles, as one of his patients could empty the bladder at the beginning of a mild crisis without trouble.

17. **Heart Massage.**—Kemp and Gardner's article is concluded in this issue and they give as their general conclusions that massage of the heart is both sound therapeutics and perfectly justifiable in all cases of death from chloroform or any anesthetic, or from drowning and allied conditions, when other means of respiration have failed. They insist on the importance of inversion of the patient and artificial respiration. Massage as described by them is method 3 (see the last issue, p. 1383), and is, in their opinion, no more radical an operation than the ordinary procedure when opening the pericardium or suturing an incised wound of the heart. Under the conditions noted they hold it to be perfectly justifiable.

Medical News, New York.

May 14.

20 *Intraspinal Injection of Lysol Solution in the Treatment of Cerebrospinal Meningitis, with a Report of Three Cases. Morris Manges.
21 Case of Carcinoma of Retained Testis. Sinclair Tousey.
22 *Modification of Mattoli in the Operation of von Hacker for Gastroenterostomy. Carlo Savini.
23 Asthenopia: A Clinical Study. D. H. Wiesner.
24 *Some Considerations in the Treatment of Tuberculosis of the Testicle. Joseph A. Blake.
25 *Some Remarks on Tuberculosis of the Urinary Bladder. Alex. B. Johnson.
26 Few Considerations Concerning the Mechanism of Developing Mental Disorder. W. K. Walker.
27 *Ammonium Sulphate Method of Sterilizing Catgut. Weller Van Hook.
28 Severe Case of Major Hysteria (Traumatic Neurosis) Following an Accident; Recurrence of Symptoms After a Second Accident; Absence of Damage Claims in Both Instances. Theodore Diller.

20. **Lysol Solution in Cerebrospinal Meningitis.**—Seager's method of treating meningitis by the intraspinal injection of lysol solution has been tried by Manges in three cases. The first was apparently a meningococcus infection, the second virulent streptococcus. At the present writing all the patients are perfectly well. The details are given. He presents the results of these three cases with some reserve, as he thinks a more extended trial is necessary, but so far as they go they are better than the results that have followed the varied plans of treatment in the severer cases at the Mt. Sinai Hospital. The treatment, moreover, is harmless. The quantity of 1 per cent. lysol solution injected is 3 to 9 c.c. for children and 12 to 15 in adults. The injections are made daily until the fluid is clear. If there is much hyperesthesia or the patient is very rigid, a short chloroform narcosis is advisable. He promises to report later experiences.

22. **Mattoli's Method for Gastroenterostomy.**—Savini describes the various methods and the Mattoli modification of the von Hacker by first anastomosing the jejunum to the posterior wall of the stomach as in the von Hacker, uniting and anastomosing the two branches of the jejunum together about three inches from the gastroenterostomy as in the Braun-Jaboulay. The afferent branch of the jejunum between the two anastomoses is held between the thumb and the middle finger of the left hand, placing the fingers longitudinally. The pressure of the index finger forms a groove in the intestine and the two uniting ridges are sewn together with a number of stitches of an interrupted or continuous suture, changing this section of the intestinal tube into a solid cord. This, he says, prevents circulus vitiosus, the bile and pancreatic juice can not flow into the stomach, but are entirely drained into the jejunum. The operation is more safely and quickly performed than the operation of Roux. Moreover, the surgeon is not compelled to carry out the operation completely. He can stop at any step in either of the three stages.

24. **Tuberculosis of the Testicle.**—Blake would castrate in case the testicle or epididymis are involved. He does not favor epididymectomy if the epididymis seems to be alone involved, since he can not be sure of this. The gland is useless when the epididymis is removed unless for internal secretion, and one testicle suffices for that function. In case both testicles are involved he would leave one testicle, if possible. In all his operations he has removed the vas deferens with usually a portion of its ampulla. He believes that the infected seminal vesicles should be excised in every case in which the disease is limited to the genito-urinary tract: 1. To remove tubercle foci in general. 2. To prevent implication of the remaining testi-

cle and the urinary tract. It is a difficult operation, but unless there are other contraindications its dangers are less than of allowing the tubercle foci to remain. In regard to the technic in operations on the vas deferens and seminal vesicles he has found the following method satisfactory:

In removing the vas with the testicle, the testicle is first excised with any skin that may be invaded, the incision is then carried up to a point opposite the internal ring and through the aponeurosis of the external oblique. The vas deferens having been separated the remainder of the cord is divided, and the vas being drawn on the peritoneum is pushed away from it with the finger until it is freed down to the ampulla. A ligature is then tied about it as low down as possible, or it is evulsed, the finger of the other hand separating it at the ampulla. The wound is then closed, as in the repair of hernia. By this method a portion of the ampulla is generally removed with the vas. This method is usually preferred to that of Büngner, in which the vas is evulsed from the external ring. When I have removed the seminal vesicle, I have first excised the testicle and vas deferens in the manner describd and have then attacked the vesicle through the curved perineal incision known as Zuckerkandl's. After freeing the dorsal surface of the prostate, the seminal vesicle is exposed by incising the layer of the rectovesical fascia binding it to the bladder. It can then be shelled out without much difficulty. At the same time any lesion in the prostate can be attacked and handled as its extent of importance may require.

25. **Tuberculosis of the Urinary Bladder.**—Johnson announces his conclusions as regards the treatment of tuberculous cystitis as follows:

(1) If other tuberculous lesions of the genito-urinary tract exist their operative removal is sometimes followed by improvement and even cure of the process in the bladder, provided the patients are placed under the most favorable hygienic surroundings. (2) Operative treatment of the bladder alone in the presence of tuberculous lesions of other portions of the urinary tract is usually harmful rather than beneficial. (3) The local treatment of the tuberculous bladder by means of injections or applications through the urethra is generally useless and often very deleterious. (4) The internal administration of the drugs known as urinary antiseptics is generally useless. (5) Palliative operations, such as suprapubic drainage, may be useful in advanced cases. (6) The general or hygienic treatment, suitable climate, out-of-door life, etc., offers these patients the best hope of recovery. (7) Such hygienic measures should be preceded by the operative removal of tuberculous foci in the kidney, the epididymis, the prostate and the seminal vesicles if such exist and the patient is still in sufficiently good condition to bear operative procedure. (8) In those rare cases where the bladder alone is affected over a moderate area only, the operative removal or destruction of the diseased tissue may be followed by improvement and even cure.

27. **Catgut Sterilization.**—Claudius' method is condemned by Van Hook, who finds that catgut has not an agreeable handling quality and becomes fragile after prolonged storage. While we must accept the claim that iodized catgut is sterile, we have a comforting sense of perfect security in using suture material that has been subjected to the action of boiling water. For these reasons he has returned to the ammonium sulphate process of Elsberg with such satisfaction that he feels it his duty to commend it. As the result of experience in more than two hundred operations in the Wesley Hospital he recommends the following method of selection and preparation:

At the outset a catgut of unimpeachable quality must be chosen and the surgeon will do well to arrange for a continuous supply of uniformly reliable material. It should not have been weakened by bleaching or polishing. Select raw, rough, unbleached material. Soak for a week in pure ether or a mixture of chloroform one part and ether two parts. Wind on glass spools in single layers. Soak for three days in aqueous solution of chromic acid, 1 to 1,000. Boil for twenty minutes in water to which, while boiling, chemically pure ammonium sulphate has been added until the crystals cease to dissolve. Wash the catgut for half an hour in cold sterile water. Store as desired. I place the spools in a solution of corrosive sublimate, one part in 95 per cent. alcohol, one thousand parts. Should the material become infected, it may be reboiled.

Boston Medical and Surgical Journal.

May 12.

29 *The Hystero-neuroses and Their Relation to the Physical Examination of All Women Patients. Daniel H. Craig.
30 *Tubercular Meningitis in Adults. Henry Jackson.
31 *Claudius' Iodized Catgut. Horace Binney.
32 *Concerning the Danger of Infection to the Attendants of Tubercular Patients. Louis F. Bishop.

29. **Hystero-Neuroses.**—The importance of a complete physical examination of all women patients with special reference to the symptoms commonly diagnosed as hysteria is insisted on by Craig. He believes that the gynecologic specialist is as likely to overestimate a hystero-neurosis as the general practitioner is to overlook it. He lays down as a rule for his students never to accept any symptom as an hystero-neurosis until every other possible cause has been rationally excluded. He does not think that a pelvic examination of every woman is necessary, and outlines his method as follows: 1. A routine history taking. By this he does not mean filling up the spaces of a printed blank, but a thorough recording of the history, beginning by inquiring in the most ordinary way to get a full menstrual and pelvic history without in the least offending the delicacy of the most scrupulous. The history completed, the patient's heart and lungs are examined by auscultation and percussion. On account of the intimate relation between the respiratory and pelvic organs, catarrhal conditions of the upper air tract are to be looked for. The abdomen next receives attention, the liver and spleen being percussed and attention given to Robson and Boas' points for evidences of gallstones. The kidneys are next investigated for palpability, mobility or enlargement and the course of the ureter followed down to the pelvic brim. The position and size of the stomach, colon and small intestines are next examined by auscultatory percussion and the colon and iliac region palpated for evidence of appendicitis, ovarian tenderness or colonic impaction. The hypogastrium is palpated for evidence of bladder enlargement or tenderness. The history will indicate which parts require the most thorough examination. With a supersensitive patient he believes in using nitrous oxid in case of pelvic exploration. The thighs and legs are examined only when the seat of special symptoms. This examination, he claims, does not consume too much time, and is of advantage not only to the physician, but to the patient. Several cases are reported illustrating the local causation of symptoms that had been attributed to hystero-neuroses.

30. **Tubercular Meningitis in Adults.**—Jackson points out the important symptoms of tubercular meningitis such as fever, headache, general malaise and often leucocytosis. The latter is really important only as a means of eliminating typhoid, but there are two classes of symptoms directly dependent on organic changes in the brain and meninges on which to base a diagnosis, disturbances of the pulse rate and paralyses of various muscles, especially of the eye and face. In the early stages of meningitis or in cases of moderate effusion we find a slow pulse as the result of irritation of the vagus while in the later stages we have an exceedingly rapid one from paralysis of the same nerve. A slow pulse or a relatively slow one in a very sick person should always raise the suspicion that there is some factor causing the lowering. The pulse of typhoid fever is slow as compared with other diseases with equal fever, but this does not apply where individuals are so sick as to suggest the probability, or even the possibility, of meningitis. He has seen cases where the slow pulse was a source of relief to the attending physician but a very prompt cause of apprehension to himself. A pulse of normal rate or one with a rapidity such as might be expected from the general conditions of the patient, is a strong presumptive proof that the case is not cerebral in origin. Paralysis of the eye muscles, or one or more muscles of the face, may be of the greatest value, only they may be so slight that doubt whether the deviation might not be natural to the individual may arise. Special attention should be paid to the existence of paralysis as it is easily overlooked when the patient is very sick. It is not rare in hospital practice to meet with cases of tubercular meningitis in adults. As they are quite different, in his experience, from those observed in practice, Jackson reviews those observed in the Boston City Hospital, with the addition of one seen in private consultation. He has notes of 18 cases, 7 between the ages of 18 and 25, 8 betwen 25 and 30, and 3 between 40 and 50 years. The previous history varies and 14 gave no history of preceding disease. In one case no history at all was obtainable. In 3 there was a history of subacute disease two years prior to hospital entry, suggesting subacute tubercular processes. In making a diagnosis of tubercular meningitis the lack of evidence of pre-existing tubercular trouble is no strong evidence against the diagnosis. In only 2 of the cases had the pathologist failed to find evidence of old tubercular processes, but none showed extensive tubercular disease susceptible of diagnosis by recognized clinical methods. The period of sickness varied, but was generally shorter than the incubation period seen in children. The prodromal symptoms in all were indefinite, suggestive of many acute febrile diseases rather than pointing towards a definite cerebral trouble. A good idea of the general impression made by them before examining is shown by the fact that in most cases the Widal

examination had been made. In all the cases but one the pulse was slow in the first part of the acute stage. In the last two or three days of life it was high. Comparing the slow pulse rate with the stupor, delirium or noisy maniacal conditions and the marked discrepancy between the pulse and the general condition, show its dependence on the cerebral trouble. The temperature is important, rarely over 102.5, usually from 100 to 101. The white count in 9 cases showed a smaller number than in acute cerebrospinal meningitis. The small leucocytosis favors the diagnosis of tubercular meningitis as against acute cerebrospinal meningitis. Lumbar puncture was done in 8 cases, in all showing high pressure of cerebrospinal fluid, but in only 1 case was the tubercle bacillus found on microscopic examination. In these respects it was very different from that of cerebrospinal meningitis, where the fluid is purulent or semipurulent and the organisms are easily obtained by culture. Examination of the fundus oculi gave little information. Retinal tubercles are certainly rarely found. Other symptoms such as local paralyses, retraction of the head, etc., were observed in the author's cases. Three of the patients died in less than two weeks of the onset of the acute symptoms, several died in less than one week and two cases lived for three weeks. Small areas of chronic tuberculosis were found in 16 of the 18 cases and other tubercular conditions, such as areas in the lungs, caseous bronchial lymph glands and tuberculous hip. Acute miliary tuberculosis was found in 7 cases and general acute miliary tuberculosis in 5. The cord was involved in a large number of cases as well as the meninges of the brain, namely, in 8 cases. He thinks this is not usually considered to be so common. A history of two cases is given.

31. **Claudius' Iodized Catgut.**—The advantages of Claudius' catgut are detailed by Binney, who considers it superior to other catgut in that it is invariably sterile, is readily absorbed, is easily and simply prepared with little trouble and is comparatively cheap.

32. **Tubercular Infection.**—Bishop points out that tuberculosis is not infectious or contagious in the sense that scarlet fever and measles are. The average individual enjoys immunity against tubercular infection to a certain extent. We are all exposed to the germs, but we do not all get tuberculosis. The tubercle bacilli can be introduced into the body with ordinarily no ill effect excepting in cases of very severe infection unless the person is repeatedly inoculated and the natural immunity temporarily broken down. Even then, if the individual is not susceptible, he will throw it off. The germs, however, are so widely distributed once in a while that a large number of persons are infected and the disease gets a start. They are sick for a little while, but do not recognize the condition and get well. The only way it is found out is in examining the lungs of those dying of other diseases, when we find that a large number have had a slight degree of tuberculosis. Tuberculosis is only contagious to those who are susceptible to it. This is an important point, because in it lies the principle of the only treatment known for tuberculosis; that is, to restore to the individual the natural immunity which he enjoyed before becoming infected, and this is accomplished by measures directed to the system in general. So far as the danger of taking care of tuberculous patients is concerned it is practically nil.

Cincinnati Lancet-Clinic.

May 14.

33 *Philosophy and Rationale of Uterine Displacements. Chauncey D. Palmer.
34 *Roentgen Ray in the Treatment of Leukemia. W. Jordan Taylor.

33.—This article has appeared elsewhere. See THE JOURNAL of May 14, ¶65, p. 1319.

34. **X-Ray in Leukemia.**—After first noticing the experience of Senn, Bryant, Brown and others, Taylor reports a case in which the *x*-rays were used with apparent improvement, though the ultimate result was not favorable. He thinks that diminishing the symptoms of leukemia warrants the opinion that if the treatment had been instituted earlier in the disease it would have been more successful. He has under treatment at the present time a girl of twelve years on whom he has employed the *x*-ray with a very decided decrease in the circumference of the abdomen and of the spleen in all directions.

New York State Journal of Medicine.

May.

35 *Diphtheria in the Country, Its Diagnosis and Management. Jeremiah R. Sturtevant.
36 *Clinical Aspects of Ileocolitis in Children. Thomas M. Rotch.
37 *Colon Bacillus Infection of the Female Genito-urinary Tract. Albert H. Ely.
38 *Treatment of Septic Affections by the Intravenous Injections of Collargol. George Tucker Harrison.
39 Sprains of the Spinal Column (Traumatic Lumbago). Arthur C. Brush.
40 *Treatment of Internal Hemorrhoids by Interstitial Injections. Earl H. Mayne.
41 Report of a Difficult Obstetric Case. E. B. Probasco.
42 Report of Eight Cases of Posterior Occiput. Emerson W. Ayars.

35.—See abstract in THE JOURNAL, xli, p. 1224.

36.—Ibid., p. 1225.

37. **The Colon Bacillus Infection of the Female Genito-Urinary Tract.**—Ely reports cases and remarks that he has presented the paper because he believes many cases of colon infection pass unrecognized. He also thinks that cases of apparently simple vaginitis and cystitis are often followed by severe toxemia and septicemia, even in young children and adults past the age when infections are likely to occur. It could be diagnosed and more promptly treated if a competent bacteriologist were employed to confirm the clinical diagnosis. He protests against the unguarded use of so-called urinary antiseptics. Toxic symptoms, in his experience, occur from these. Topical applications by means of the cystoscope with apparently little practice can be made with the modern instruments by the general practitioner and greatly relieve the distressing symptoms of diseased bladder.

38.—See abstract in THE JOURNAL, xli, p. 1224.

40. **Hemorrhoids.**—Mayne prefers the carbolic-acid injection treatment, and thinks that harm has been done by Andrews, who first discovered and published the method in so decidedly condemning it. Mayne holds that its success is fully equal to that of other methods, and it has a number of advantages. 1. The ease with which patients will submit to the treatment. 2. No pain. 3. No detention from business or other duties is necessary, except in cases of imprudence. 4. No general anesthetic is required, except in complicated cases. 5. There is not the retention of urine which usually follows the clamp, cautery and ligature operations. Granting there may be occasional recurrences, the chance of undergoing a second operation is preferable to the more radical ones.

Medical Examiner and Practitioner, New York.

May.

43 Bearing of Eyestrain on the Duration of Human Life. Ambrose L. Ranney.
44 Diagnosis and Prognosis in Diseases of the Skin. William B. Brown.
45 Pulse as a Guide to the Life Insurance Examiner. Robert H. Babcock.
46 Blood as a Detail in Life Insurance Examinations—a Study in Technic and Interpretation. Woodbridge H. Birchmore.
47 Importance of Alcoholism in the Etiology of Albuminuria and Glycosuria. Frank G. Ketchum.

International Journal of Surgery, New York.

May.

48 *Conservatism in Gynecological Surgery. W. F. B. Wakefield.
49 Importance of Careful General Preparation of the Patient for Surgical Operation. Augustin H. Goelet.
50 Random Thoughts on the Treatment of Post-operative Cases. R. S. Joyce.
51 Nephrolithiasis. C. H. Churchill.
52 The Surgical Assistant. (Rectal Operations.) Walter M. Brickner.

48. **Conservatism in Gynecologic Surgery.**—This is considered under four heads by Wakefield: 1. Vaginal drainage for pelvic abscess, septic edema and hematocele. The place of this procedure is established at the present time. It may simply be palliative or produce a permanent symptomatic cure. 2. Conservative operations on the uterus. Myomectomy is now generally advocated, but contraindications are given such as conglomerate growths whose relation with the uterus can not be defined; pelvic inflammatory disease, grave anemia, grave organic disease of the vital viscera, when the tumor is so large as to make the resulting wound difficult of closure and the involution of the thinned uterine walls dubious, that is, tumors

extending above the umbilicus, and lastly, an approaching menopause. Cullen advises against attempting a myomectomy in the presence of inflammatory disease of the adnexa, but Wakefield thinks that by paying attention to the above noted exceptions, myomectomy has been well established as the only treatment for uterine myomata. 3. Conservative operations on the ovaries. The general consensus of opinion is in its favor under almost all conditions. The only conditions that justify a sacrifice of the ovaries are large cysts, abscesses, hematoma or fibroids which have entirely destroyed all the healthy ovarian tissue; second, the presence of malignant disease, and third, the presence of tuberculosis. 4. Conservative operations on the tubes. Several cases are here reported. The opinions of surgeons differ. The author's conclusions are summarized as follows:

1. We should be very cautious about applying conservatism to cases known to have been recently infected. 2. The advent of an acute attack of localized peritonitis in a patient suffering from chronic infection, in other words, an acute "lighting up" of an old infection, does not contraindicate conservatism. 3. The presence of acute infection in one tube, which it is deemed advisable to remove, does not call for removal of the other tube also, unless it is similarly diseased. 4. The longer the patient has been infected the more likelihood there is for the pus or inflammatory products in the tube to be sterile, and the more safely may we consider conservatism. 5. Of the two procedures, resection of the tube and amputation of the tube, the latter is the safer procedure, as we do not then leave behind a lot of thickened, inflamed and more or less infected tissue to menace our results, and that a stump of a tube is capable of carrying an ovum to the uterus has been demonstrated.

Medical Review of Reviews, New York.

April 25.

53 *Constitution and Biology of Brewers' Yeast. Heinrich Stern.
54 *The Treatment of Cancer by Its Own Toxins. P. J. McCourt.

53. **Yeast.**—Stern's article is an instructive account of yeast and its growth, pointing out the advantages of the pure culture used in many cases, and a study of the different kinds of yeast on economic principles.

54. **Cancer.**—McCourt calls attention to a former paper in which he described his method of preparing the cancer toxin. The cancer-tissue is pressed and triturated in purest vegetable glycerin, and the juices thus obtained are separated until micro-organisms are no longer found. The resultant fluid contains all the ptomaines or alkaloids of the cancer virus as well as those of other diseases associated with them in the subject from whom the virus was collected. They are highly toxic, but when reduced to medicinal strength and exhibited to a cancer patient having history and complications nearly identical with those of the person who furnished the toxin the latter will act as an antidote to the poison generated by the cancer cell. He reviews some of his former publication and gives some experience with these toxins.

Maryland Medical Journal, Baltimore.

May.

55 *The Increasing Mortality from Pneumonia in Baltimore and Its Causes. J. Hall Pleasants.
56 Massage in Modern Therapy. Reni Tauer.

55. **Pneumonia.**—Incited by recent publications as regards the increasing virulence of pneumonia Pleasants has studied the statistics of Baltimore for the past fifty years and finds that there has been a gradually rising curve for at least half a century with a steady and gradual increase up to 1890. He emphasizes this fact because whatever influence influenza may have had it must have been subsequent to that year. He considers successively several factors which may co-operate in producing this increasing mortality: 1. Increased density of the population; the greater prevalence of pneumonia in densely populated countries has long been noted. 2. General prolongation of life by several years and reduction in the mortality from intestinal diseases in young infants increases the number of individuals in the extremes of life who are particularly susceptible to pneumonia. 3. Climatic changes. This is an uncertain factor. He thinks there may be something in the overheating of dwellings as lowering resistance. 4. The census returns show a greater susceptibility of foreigners to pneumonia and a higher death rate among them. 5. The negro element in the population. In Baltimore this is an important factor. The high death rate among the negroes is just about balanced by the very high birth rate. 6. More accurate diagnosis and exact terminology in the vital statistics. Formerly a large number of cases of obscure and senile pneumonias escaped diagnosis, and with the increased use of the stethoscope they are now less frequently overlooked. 7. The decreased death rate from consumption as a causal relation to the increased pneumonia mortality has been suggested. He hesitates to express an opinion on this point. 8. The increased virulence of the pneumococcus. This is only conjecture not yet supported by evidence. A certain number of cases of pneumonia are not even due to this organism. 9. Influenza, which has come into play since 1890. We are forced to the conclusion that what we call the grippe has a close and intimate relation to many cases of pneumonia, and if not a cause, is certainly a predisposing factor. 10. Some unknown factor on which we need not speculate. We must confess our ignorance and attribute part of the spread of the disease to a factor as yet unknown. He says there is nothing peculiar about the pneumonia situation in Baltimore at the present time. The same state of affairs exists elsewhere. The problem is one of national importance. We can not say that the situation looks hopeful from the standpoint of general prophylaxis.

St. Paul Medical Journal.

May.

57 *Acute Diseases of the Abdomen. Carl J. Holman.
58 *The Present Treatment of Diphtheria. Walter R. Ramsey.
59 *Pneumonia. Christian Johnson.
60 Pertaining to the Transportation of the Dead. H. M. Bracken.
61 Puerperal Septicemia. J. A. Regner.
62 Neurasthenia—Alcoholism—Insanity. William Lee Howard.
63 Iodized Catgut. A. W. Abbott.

57. **Acute Diseases of the Abdomen.**—Holman reports several cases of peritonitis occurring from perforation, appendicitis, etc., and he favors for the treatment of these cases rest in bed and abstinence from food or cathartics by the mouth, salines should not be used, for mild cases may become severe; but an enema may be employed if the constipation exists. The laity should be instructed as to the value of early operation. If pus is present the Fowler position is of value, but if post-operative infection occurs, Clark's position should be maintained. In severe intra-abdominal conditions it is well to have as a consultant one who is accustomed to intra-abdominal pathology from practical observation.

58. **Diphtheria.**—Ramsey points out the value of antitoxin in diphtheria, holding that if given early enough it is a specific in at least 95 per cent. and greatly reduces the mortality, even in the later cases. Sufficient quantities should be given. Death when it occurs results in many cases from the damage done the heart and nervous system before antitoxin is given. There is a small percentage of cases in which antitoxin seems to be ineffective. Post-diphtheritic paralysis is apparently no less frequent than before antitoxin. Intubation and tracheotomy should be required if the heart shows evidence of weakness, and should be done with the patient in the horizontal position. We should remember that heart symptoms sometimes occur as late as several weeks after apparent convalescence. A careful examination of the heart is required daily. Alarming symptoms are sometimes produced by antitoxin, and we should employ it with some reserve, using all the means in our power to make a proper diagnosis, but always in doubtful cases, giving antitoxin the benefit of the doubt.

59. **Pneumonia.**—Johnson's view is a little different from the ordinary. He holds that pneumonia is not an infection, arguing from the fact that there is practically no incubation period in some cases, and that auto-intoxication is the more probable cause. The urotoxicity is gradually diminished during the course of pneumonia as proven by experiments. This he thinks is a point in favor of his theory. He protests against the idea that we can do nothing in pneumonia. No two cases are alike. The patient, not the disease, must be treated. We must open the emunctories of the body but not debilitate the system. In private practice he advises gentle regulation of the bowels, mild diuresis and diaphoresis, alleviation of pain by heat and morphia hypodermically if necessary. If symptoms of debility manifest themselves stimulation by strychnia, digitalis and alcohol according to the symptoms are indicated.

New Orleans Medical and Surgical Journal.

May.

64 *Mouth Parts and Salivary Glands, Normal and Otherwise, of the Yellow Fever Mosquito. George E. Beyer.
65 The Advantages of Medical Organization. J. F. Bouquot.

64. **Yellow Fever Mosquito.**—In this elaborate article, which is quite fully illustrated, Beyer describes and discusses the possibility of the parasitic nature of the germ of yellow fever and offers the following conclusions:

1. That the glands of contaminated mosquitoes of the age of twelve days or more contain phases of development of an animal organism, the last one of which consists in an exceedingly small ovoid hyaline body of about one micron in length. 2. That this organism or any of the described phases have thus far not been observed in non-contaminated mosquitoes. 3. That the last phase, the so-called "Sporozoites," being found in the lumen of the gland of an insect which had produced a typical infection, must be regarded with suspicion of being the causative agent of the disease. 4. That proof of this effect can only be arrived at by experiments indicated in the body of this paper.

Annals of Ophthalmology, St. Louis.

April.

66 A Statement of Our Present Knowledge of the Architecture of the Cerebral Visual Apparatus, in the Light of the Neuron Theory, and the Later Clinico-Pathologic Investigations. W. E. Gamble.
67 *Case Illustrating the Inadequacies of the Present Methods for the Recognition of Distant Color Signals; with a Series of Brief Plans for Remedying the Same. Charles A. Oliver.
68 *Kerato-conus. G. Griffin Lewis.
69 *Necessity for the Annual Systematic Examination of School Children's Eyes, Ears, Noses and Throats, by School Teachers. Frank Allport.
70 Cataract—a Historical Review of Its Surgical Treatment. Samuel H. Brown.

67. **Distant Color Signals.**—Oliver here describes what Wilson has aptly called short-sightedness to color, and reports a case in which a man who passed the ordinary tests discovered his own deficiencies and stood an examination. He thinks the methods for color testing at the present are inefficient for the detection of many low degrees of subnormal color perception, the most dangerous and least suspected class. Every candidate for color testing should be medically proved to be free from bad habits, systemic disturbance and ocular disease, and accurate notes of the character and degree of the color sense should be kept and added to at regular intervals. All testing for color among the Army, Navy, marine and railway employes should be conducted in the situations which are occupied by the subjects during work, and at distances which are employed during signaling, also during various stresses of the weather to which the candidates are subject. They should be done during the time of the day and with the illuminating exposures that are used during their daily employment, and with adaptation of materials that are to be gazed at at their regular work. All the test colors must be kept at uniform standards of relative distinctness, saturation and brightness ordinarily used.

68. **Keratoconus.**—The various methods of treating this condition are described by Lewis, who thinks that the most generally adopted one of late years and the least painful is the cauterization of the apex with the actual or galvanocautery. He describes the method. The majority of operators first cauterize the apex with an oval electrode, and then pierce the eschar with a fine-pointed electrode. They dilate the pupil, and cocain is used, as no speculum is employed. The oval electrode is placed cold over the apex and withdrawn as soon as it has been brought to a red heat. Then with a needle electrode, the size of which depends on the amount of contraction required, the center of the apex is pierced and the needle quickly withdrawn so as not to heat the aqueous too much and produce traumatic cataract, for the same reason the electrode is kept down from white heat. This procedure is easily performed, does not result in anterior synechia, allows rest and contraction of the cornea by the slow and continuous drainage of the anterior chamber and leaves a small scar. A moderately tight bandage is kept on most of the time following the operation, and increased tension may be combated with eserin. A few bad cases have been reported from this method, but he has had more good results with fewer bad results than with any other. It is now considered a classic treatment.

69.—This article has appeared elsewhere. See THE JOURNAL of March 19, title 133, p. 801.

Albany Medical Annals.

April.

71 *The Pathology of Diabetes. Richard M. Pearce.
72 *The Physiologic Chemistry of Diabetes. David L. Edsall.
73 *Medical Treatment of Diabetes. W. H. Thomson.
74 *The General Management of Diabetes. Frederick C. Shattuck.

71. **The Pathology of Diabetes.**—Pearce summarizes the relation of the pancreas and especially the islands of Langerhans to diabetes as sharply separating at least one form from all the others, and offering a distinct departure for the study of those forms of glycosuria, to which some knowledge of the complexity of carbohydrate metabolism may be assumed to be due to the destruction of other organs.

72. **Physiologic Chemistry of Diabetes.**—Edsall reviews the publications on this subject, and remarks that the important facts known are unfortunately few. When sifted down they are chiefly that the pancreas exercises a very great influence over carbohydrate metabolism, but it is not known how this is done. It probably does not do so merely by providing glycolytic ferment, but possibly by interfering with the glycolitic activities of other tissues. It is becoming evident that carbohydrate metabolism is intimately associated not only with the pancreas, but also with other tissues, and is of somewhat greater complexity than has heretofore been considered. At present one is justified in at least suspecting that carbohydrate metabolism is comparable in its complexity with that of proteid metabolism.

73. **The Medical Treatment of Diabetes.**—Thomson considers that glycosuria which has lasted more than one year is diabetes. Time is the principal element in its diagnosis. He would study the family hereditary proclivity. He finds that there is no race so subject to diabetes as the Jews. The question of age and state of nutrition of the patient are to be considered. He makes it a point to determine what is the daily output of urea as well as the sugar. If the percentage of urea is high, there is emaciation, even if the patient is adipose. The sugar may disappear, but the urea excretion remains one-half more or double what it ought to be. Obesity in a patient calls for special medication on account of the danger to the heart. If he has oxalates alternating with abundant uric-acid crystals in his urine, all the better. As to medicines, he rarely gives opium, codein or any of the opium derivatives. The nervines are only functional remedies, none of them can touch the diabetes itself, they are needed to relieve the symptoms or in emergencies. For a number of years he has advocated the use of cod-liver oil in diabetes, and reports cases of its beneficial action. Next to cod-liver oil, he would place iron, and the old-fashioned Hooper pill is very useful when there is a tendency to constipation. He thinks that the internal secretion of the pancreas in the islands of Langerhans is of the nature of an enzyme, which can propagate its action from very small beginnings. He suggests that in examining the urine we should not merely look out for abnormal ingredients, but also investigate whether the normal constituents are present in proper proportion, and if we do this, we would find more cases of defect than we do at present. The free administration of antiseptics, he thinks, is more promising in diabetes than any other means, cod-liver oil and iron excepted. He includes arsenic in this class of antiseptics. The alkalies in the form of mineral waters have held a deserved place, but their action is always to be borne in mind; that is, the free use of all saline waters tends to increased waste, and they should not be given to anyone really losing flesh. Diabetes is serious in that it virtually compels starvation of an essential element of food. The system must have sugar. If it does not get the sugar it can use, it will turn to its own proteid for it. Along with this perversion, poisons begin to be generated, of which oxybutyric acid and its derivatives are doubtless only a part. We can not neutralize them. In case of diabetic coma, he relies on one of the most trustworthy diuretics which we possess, namely, prolonged intestinal irrigation with normal saline solution. The best instrument is Kemp's rectal irrigator. Hypodermic injections of 7 to 14 grains of camphor in sterile almond or olive oil best sustain

the failing heart, while diluted milk holding all the sodium bicarbonate which the patient can take is the only recourse for food.

74. **The General Management of Diabetes.**—Under the head of diabetes, Shattuck includes all grades of failure to burn sugar in the organism. The principles which should guide us are: To first thoroughly test the amount of urine and sugar without change in the diet or mode of life, and except in cases where the condition is evidently either very mild or severe, he thinks it is best to enforce absolute or nearly absolute diet at once. If acetozone and diacetic acid are present, a radical and rapid change of diet is dangerous. The diet list should be adapted to each patient. He does not believe in the printed lists given out by manufacturers of food products. An approximate adjustment of the food to the requirements must be aimed at, and the body weight noted at stated intervals; more frequent at the beginning of treatment than later, perhaps. The weight with the general symptoms or their lack and the condition of the urine will generally prove safe guides as to the judiciousness of the diet. In favorable cases under a strict diet he expects to see the sugar disappear in two or three weeks, the weight increasing. How long it should be kept up depends on the type of the disease, which depends largely on the age and weight of the patient. In the milder cases he would keep the patient on a strict diet for one or two months, and then test the tolerance of the stomach for starches, by giving a little bread daily, increasing the amount as the tolerance warrants. In the more severe cases which are rendered sugar-free with difficulty, one must be more careful. He has discarded the use of diabetic breads, as he finds from his experience that few of them are reliable. He has never used the skimmed-milk cure, as recommended by Donkin. It does not seem to him rational, though he admits that it does not fail to work well in some cases. A day of starvation every two or three months is useful in some cases. The bowels should receive careful attention. Baths, etc., should be given, and the bodily temperature carefully regulated by the clothing, etc., avoidance of worry and anxiety insisted on. Muscular exercise, properly regulated, is of use. A change of climate may be advisable.

Journal of the Association of Military Surgeons, Carlisle, Pa.

May.

75 Organization and Conduct of an United States Army Medical Supply Depot. J. Morris Brown.
76 Treatment of Anterior Dislocation of the Shoulder with Report of a Case in Which Reduction Was Prevented by the Detached Greater Tuberosity. George T. Vaughan.
77 Sick-bay Notes from the Battleship Oregon. Charles F Stockes.
78 *Wounds by Lead and Jacketed Bullets in the Cuban Insurgent War. Eduardo C. Poey.
79 Traumatic Rupture of the Choroid—Report of a Case. Edward Stieren.
80 Sanitary Organization of the Russian Army. John Van Rensselaer Hoff.
81 Another View of Radical Operation for Inguinal Adenitis from a Navy Standpoint. Paul E. McDonnold.
82 The Kahunas—Witch Doctors or Sorcerers—of the Hawaiian Islands. Blair D. Taylor.

78. **Gunshot Wounds.**—The experience of the Cuban surgeons in the insurrection prior to the American intervention, are described by Poey, who thinks that for military purposes the Mauser and Krag bullets are comparatively useless, as they can not stop the disposition to fight unless they hit a very important and vital part. The wounds are slight and heal quickly. The brass-coated bullet is worse and more destructive. The ordinary lead 43-caliber of the Remington rifle is also a dangerous and destructive missile. The less surgical interference in military practice the better. Common sense and antiseptic treatment will do more for the treatment of the Mauser and the like bullet wounds than all the surgical interference possible. With brass bullets, however, an exception is made, but then only in special cases. First-aid dressing will do better than all the surgical interference known.

American Practitioner and News, Louisville, Ky.

April 15.

83 Tubercular Peritonitis. Carl Weldner.
84 Diabetes Insipidus. George Jenkins.

California State Journal of Medicine, San Francisco.

May.

85 *What Should Be the Physician's Position in the Body Politic? H. Bert Ellis.
86 Address in Medicine, Medical Society of the State of California. R. F. Rooney.
87 *Surgical Treatment of Chronic Dysentery. J. Henry Barbat.
88 Tuberculosis of Mammary Gland. Myrtle Ap Lynne.
89 Killian's Radical Operation for Chronic Frontal Sinusitis, with Demonstration of Case. A. Barkan.
90 Value of Municipal Laboratories. Frank Paterson.
91 Rat and His Parasites; His Rôle in the Spread of Disease, with Special Reference to Bubonic Plague. (Continued.) B. J. Lloyd.
92 Some Recent Advances and Investigations in Rhinology and Otology. Louis C. Deane.

85. See THE JOURNAL of May 7, p. 1212.

87. **Chronic Dysentery.**—Barbat has treated cases of dysentery in returned soldiers from Manila by surgical methods, doing a colostomy and producing an artificial anus. His conclusions are that a number of patients with chronic dysentery do not recover under medicinal treatment. These are principally the amebic type, with prospects of exacerbations, abscesses of the liver, bowel contraction and marasmus. These complications may be obviated in many cases by a timely operation, which in itself is not particularly dangerous. The relief afforded is immediate, and will result in cure in many instances. In the cases reported, one patient after closure of the artificial anus became dissipated and developed a liver abscess, thus showing that we can not always be sure of having destroyed all the amebæ and the peristaltic action and absorbing capacity of the bowel will permit the amebæ which may be present to pass through into the circulation and cause abscess of the liver. In the second case the treatment was successful.

Journal of Eye, Ear and Throat Diseases, Baltimore.

March-April.

94 A Case of Retinitis Proliferans. Lee Cohen.
95 The Pupil in "Pink Eye." D. Kerfoot Shute.

Canadian Practitioner and Review, Toronto.

May.

96 Some Points on Tuberculosis. John L. Davison.
97 The Communion Cup. John Hunter.

Kansas City Medical Index-Lancet.

May.

98 The Blood. (To be continued.) M. P. Overholser.
99 Infantile Epilepsy. George B. Norberg.
100 Some Clinical Remarks on the Treatment of Urethral Stricture by Gradual Dilation. Charles H. Miller.
101 The Passing of Rubber Gloves in Surgery. B. N. Stevens.

Brooklyn Medical Journal.

April.

102 Some Observations on Disease of the Thyroid, with an Analysis of 28 Cases. Henry G. Webster.
103 Surgery of the Kidney. H. Beeckman Delatour.
104 Microtia: with an Account of Two Cases Occurring in Members of the Same Family. William C. Braislin.
105 Brief Report of a Year's Hospital (Private) Work. J. Grant Baldwin.
106 Paratyphoid Fever. William V. Pascual.

May.

107 Cerebrospinal Meningitis in Brooklyn. William Browning.
108 After Thoughts: A Correspondence. A. Jacobi.
109 Abscess of the Lung. With Report of Two Cases. H. Beeckman Delatour.
110 Chorea. W. L. Chapman.
111 Medical School Inspection in Greater New York. Florence G. Emerson.
112 General Practitioner and the Quarantine of Contagion. Henry N. Read.
113 Case of Dystocia; Child of 21½ Pounds Weight. Charles W. Stickle.
114 Extreme Rotation of Full-term Uterus by Strangulated Fibroid. Necessitating Forced Delivery and Hysterectomy. Robert L. Dickinson.

Critic and Guide, New York.

May.

115 Treatment of Valvular Disease of the Heart. O. T. Osborne
116 A Few Thoughts on the Solution of the Tuberculosis Problem S. A. Knopf.
117 Treatment of Pneumonia in Children. L. Jacobi.
118 Treatment of Erysipelas. A. Herzsfeld.
119 Sexual Neurasthenia. F. R. Robinson.
120 The Abortive Treatment of Gonorrhea in the Male. Frederic Bierhoff.

American Medical Compend, Toledo.

May.

121 The Psychic in Medicine. J. L. Tracy.
122 Colds. S. Justin Derbyshire.
123 Prevention and Treatment of Puerperal Convulsions. Charles W. McIntyre.
124 The Mesogastrium. Byron Robinson.

Wisconsin Medical Journal, Milwaukee.

April.

125 Diabetes Mellitus. W. H. Neilson.
126 Treatment of Graves' Disease. Arthur W. Rogers.
127 Manifestations of Rheumatism in Infancy and Early Childhood. Arthur T. Holbrook.

128 Case of Dwarf Pelvis with Cesarean Section. J. C. Cutler.
129 Acromegalia. A. F. Heising.

University of Pennsylvania Medical Bulletin, Philadelphia.

April.

130 Case of Acute Hemorrhagic Leukemia. James W. Wister and Norman B. Gwyn.
131 Operative Treatment of Trifacial Neuralgia, with the Report of a Case of Removal of the Gasserian Ganglion for Recurrence Following Intracranial Neurectomy of the Superior Maxillary Nerve. Gwilym G. Davis.
132 Surgical Treatment of Trifacial Neuralgia. A. Van Gehuchten.
133 The Skin: A Study in Elasticity. Edward Lodholz.
134 Table of Comparison Between Typhus and Typhoid Fevers. Alfred Stille.
135 Refutations of A. F. Stewart's Claims About Typhus and Typhoid Fevers, February, 1862. Alfred Stille.
136 Remarks on Commencing the Study of Medicine. To My Brother Moreton. October, 1841. Alfred Stille.

Carolina Medical Journal, Charlotte.

April.

137 Abdominal Operations During Pregnancy, with Report of Five Cases. H. A. Royster.
138 Complications of Gastric and Duodenal Ulcer. John H. Gibbon.
139 Radiotherapy for Cancer and Other Diseases. W. W. McKenzie.
140 Puerperal Sepsis. H. S. Lott.
141 Some Clinical Observations on the Prophylaxis Treatment of Uric Acid Conditions. J. C. Walton.

New Yorker Medicinische Monatschrift.

April.

142 Neuere Anschauungen über Pneumonie und Pneumokokken-Infectionen. Charles S. Williamson.

Medical Times, New York.

May.

143 Water and Air in Their Relation to Disease. A. M. Leonard.
144 Toxin and Antitoxin of Pneumonia. Frank C. Wilson.
145 Toleration in Medical Opinion and Practice. David A. Gorton.
146 The Etiology of Tuberculosis. John B. Huber.
147 Advances in Malarial and Other Fevers. Henry Taylor.
148 Nature and Treatment of Varicose Veins. G. R. Johnson.

Medical Standard, Chicago.

May.

149 Autointoxication and Its Treatment. Heinrich Stern.
150 Smallpox; a Clinic. Heman Spaulding.
151 Nature and Importance of the Urinary Changes in Nephritis. Arthur R. Elliott.
152 Cure of Chronic Suppuration of the Accessory Nasal Sinuses: Clay Model Demonstration of the Surgical Procedures. William L. Ballenger.
153 Tonsil Punch Forceps. John E. Rhodes.

Pennsylvania Medical Journal, Pittsburg.

April.

154 Treatment of Cancer of the Uterus by Roentgen Rays. The Etiology of Eclampsia. John G. Clark.
155 Gynecologic Therapy. Charles F. Spangler.
156 Sarcoma of the Maxillary Antrum and Orbit with Removal from Antrum and Orbit. J. F. Klinedinst.
157 *Investigation of Certain of the Reflexes and Sensory Phenomena and the Condition of the Eyegrounds Based on a Study of 103 Healthy Young Men. Theodore Diller.

157. This article appeared elsewhere. See THE JOURNAL of May 7, No. 3, p. 1247.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

May 7.

1 *A Case of Strangulated Femoral Hernia. Andrew Clark.
2 An Operation for the Radical Cure of Hernia. J. Hogarth Pringle.
3 *Gastro-jejunostomy for Pyloric Stenosis, Gastric Ulcer and Some Other Non-malignant Conditions. Gilbert Barling.
4 Acute Intestinal Obstruction Caused by Syphilitic Ulceration in the Ileum. John M. Elder.
5 Some Cases of Intestinal Obstruction Successfully Treated. William Taylor.
6 Congenital Hour-glass Stomach. W. F. Brook.
7 Case of Congenital Hypertrophic Stenosis of the Pylorus. Arthur J. Cleveland.
8 A Foreign Body Impacted for Seven Months in the Esophagus. Andrew Fullerton.
9 Case of Malignant Obstruction of Esophagus; Gastrostomy. E. Solly and H. I. Daggett.
10 *Treatment of Acne, Furunculosis and Sycosis by Therapeutic Inoculations of Staphylococcus Vaccine. A. E. Wright.

1. **Hernia.**—The operation here described by Pringle is admittedly very similar to the later method of Halsted with the utilization of the cremaster. He, however, prefers to put the flap made of cremaster and other fascia in front of the internal oblique, which he explains is not Halsted's plan.

3. **Gastrojejunostomy in Non-Malignant Stomach Conditions.**—Barling favors gastrojejunostomy for pyloric stenosis to put the stomach at rest, to stop hemorrhage from ulcer, to relieve pain, and for atonic dilatation of the stomach with marked proptosis. In pyloric stenosis the results have been generally good. Hemorrhage and pain symptoms have been relieved, but relief may not be permanent, as in the two cases in his experience. The results have been discouraging in atonic dilatation of the stomach, etc. His experience on the whole is in favor of the suture, though he can not ignore the quickness and ease of the Murphy button, and in some cases it is indicated. He has performed gastrojejunostomy 18 times, with 2 deaths. Eight of these were by suture only, with no death; 2 were by suture and absorbable bobbin, with 1 death; 8 by the Murphy button, with 1 death. In the case with the absorbable bobbin, death was caused by unexplainable hemorrhage. With the Murphy button it was due to the late operation when the tissues were not sufficiently capable of repair and the button ulcerated through. The absolute necessity of saving every minute possible necessitated its use, and in the suture cases troublesome vomiting occurred in 4. In 2 cases treated by suture and bobbin, it did not occur, nor in cases where the Murphy button was used. He describes his technic as follows:

To gain access to the stomach the abdomen is freely opened in the middle line, the transverse colon and great omentum are turned upward, the transverse mesocolon is divided, care being taken to avoid the arches of vessels supplying the colon, and the posterior surface of the stomach is seen. Lying close to it is the junction of the duodenum and the jejunum to the left of the vertebral column. A portion of the jejunum not less than 12 inches from this junction is selected for the anastomosis; it is emptied and lightly clamped with Doyen's forceps so as to control its canal and its circulation. A pouch of stomach, drawn through the opening in the mesocolon, is similarly treated, and the parts surrounded by sponges are, as far as possible, brought outside the peritoneal cavity. The junction is made by two rows of sutures; the outer, including the peritoneum and muscle, is interrupted once when it has completed a half circle, and is then laid aside. Stomach and jejunum having then been opened, and the larger vessels in the stomach incision ligatured, the second suture is applied, including all the coats, and it makes a complete circle without interruption. The parts have been held in apposition by an assistant who manipulates the clamp forceps, and at this point the forceps may be taken off before the outer row of suturing is resumed and completed. The parts are swabbed over with normal salt solution and returned into the belly.

Several illustrative cases are reported.

10. **Staphylococcus Vaccine.**—Wright reports cases of furuncle, acne and sycosis treated with staphylococcus vaccine of standardized strength. He thinks it advisable to use one made with the particular strain of micro-organism that has acclimatized itself in the patient's organism.

The Lancet, London.

May 7.

11 *Some Disorders of the Blood and Blood-forming Organs in Early Life. Robert Hutchison.
12 *Recent Studies on the Tissue-lymph Circulation. George Oliver.
13 Abnormal Muscular Contractions. E. Noble Smith.
14 Mesenteric Cysts. E. P. Baumann.
15 Amaas, or Kaffir Milk-pox. W. E. De Korte.
16 A Case for Diagnosis. W. Johnson Smyth.

11. **Blood Disorders in Early Life.**—Hutchison describes the conditions of the blood in early life; the high percentage of red cells and the rapidly decreasing amount of hemoglobin produce a sort of semichlorotic condition in infants after the first half year. The area of red marrow blood-producing surface is much larger in proportion in infants. There is no reserve power of formation as there is in the adult, and the infant must live up to the limits of the blood-forming capacity. This may perhaps explain why children stand hemorrhages badly and why they become anemic on slight provocation. The leucocytes are discussed at length, and he follows Ehrlich's idea that the non-granular cells are largely produced in the adenoid tissue. The red marrow at this period of life is engaged almost to the limit of its functional capacity in the production of red cells individually less richly charged with hemoglobin than in the adult. The periods of the granular formation of white cells is similar to that in the adult though the non-granular cells are present in much larger absolute numbers, and the adenoid tissue producing them is abundant, active and widely diffused. While this specialization of the function of the marrow and adenoid tissue has taken place in the child as in the adult, the former standing nearer to the

period of fetal life may be expected to be able, under stress of disease, to revert more easily to fetal methods of blood formation and to show in pathologic conditions a less sharp degree of specialization on the part of the marrow and adenoid tissue, respectively. A combination of a high absolute number of non-granular cells with a relatively low percentage of hemoglobin constitutes the hall-mark of the infantile type of blood, and in all conditions of profound anemia in childhood these characteristics are markedly accentuated. Passing from this physiologic description, he describes the conditions of congenital abnormalities in infants, primary and secondary anemias, and remarks on the notable rarity of pernicious anemia in childhood, and on the condition of infantile scurvy. He does not fully accept Corlette's opinion as to the part played by the citrates in this condition. He has found that the artificial administration of calcium citrate, which so abounds in milk, is therapeutically less useful than the artificial salts of potash.

12. **The Tissue-Lymph Circulation.**—Oliver's second lecture reviews the effects of fatigue, exercise, rest and sleep, respiration of gases, internal secretion, temperature, gravitation, etc., and discusses the question whether tissue lymph is an exudation or secretion and whether there is an intermediary circulation. He concludes with some practical deductions as regards the dietary of gout and the use of organic products as remedies. His conclusions are briefly summarized as follows:

1. Tissue lymph is intermittently effused, for example, after the ingestion of food, during exercise, rest after exercise, and during sleep. 2. The rapid effusion and removal of it in states of rest suggest the probability of a circulation between the blood and the tissue spaces—a circulation independent of the lymphatic circulation. 3. The apparent physiologic intent of the effusion is reparative, and that of its absorption is the removal of tissue waste. 4. The normal intermittency of the fluid exchange becomes in many pathlogic conditions less and less complete. By studying the conditions which increase or decrease lymph effusion we ought to gain a clearer insight how to control derangements of nutrition and metabolism.

The Practitioner, London.

May.

17 Two Clinical Lectures on Progressive Muscular Atrophy. Lecture 2. F. W. Mott.
18 Relapsing Fever in Egypt. F. M. Sandwith.
19 Diet in Gout. Arthur P. Luff.
20 Old Age. Guthrie Rankin.
21 *How to Treat Backward Displacement of the Uterus. Thomas Watts Eden.
22 Some Aspects of Obesity. Leonard Williams.
23 *The Nucleus in Malignant Neoplasms. Peter Paterson.
24 *Malignancy of Some Apparently Benign Ovarian Cysts. Frank E. Taylor.
25 A Review of Some Recent Observations on Gastric Affections. H. D. Rolleston.
26 Seborrhea and the Seborrhoides: A Review of Some Recent Literature on Skin Diseases. J. M. H. MacLeod.

21. **Retroversion of the Uterus.**—Eden concludes that backward displacement of the uterus frequently gives rise to no symptoms and requires no treatment, but where symptoms are caused, complications are usually present, either consecutively or independent. Before beginning treatment the question whether the symptoms are hysterical should carefully be considered. The pessary should only be adopted as a temporary measure or in "simple" cases; it rarely cures. Local depletion is a valuable adjunct to treatment by pessaries. Cases unsuitable for treatment by pessaries or where they have failed to relieve, should be advised to undergo ventrofixation. The method of performing this operation that he recommends is not that of Kelly. The suture, he thinks, should be placed as low down as possible on the anterior uterine wall, avoiding the bladder below and coming short of the fundus above, thus apposing a broad surface to the abdominal wall and allowing the development of the uterus in subsequent pregnancies.

23. **The Nucleus in Malignant Neoplasms.**—Paterson has observed in a number of carcinomata the nuclei throwing out processes like pseudopodia, these sometimes forming the first stage of daughter cells by budding, but in others are the beginning of the migration of the nucleus from its cell, either to an adherent cell or in the surrounding fibrous tissue, or it may produce a daughter nucleus, and become the center of a new cell formation, or may coalesce with another similar nucleus. Sometimes several nuclei fuse, and thus a large mass of nuclear matter is found, from which daughter nuclei are set free by budding or fission. Coincident with these, others are proliferating by mitosis with a diminished number of chromatin-filaments. The processes observed are primarily analogous to the formation of polar bodies and the union of sexual elements, but the resulting nuclei are only able to reproduce cells similar to those from which they originated. The phenomenon can be observed more or less throughout the tumor mass, but a proliferation by budding is more notable near the periphery and mitosis toward the center of the tumor. He explains the metastasis by nuclei which have undergone this change and possess this power, having been transferred to other parts and repeating the process in other situations. As to the exciting cause of this alteration of nuclei he is non-committal.

24. **Malignant Character of Apparently Benign Ovarian Cysts.**—From a consideration of the cases here published and others, Taylor concludes that:

1. It is impossible by mere macroscopic examination to distinguish between benign and malignant ovarian cysts. Every ovarian cyst should be submitted to microscopic examination to determine its precise nature and give accuracy and precision both to diagnosis and prognosis. 2. Every ovarian cyst should be submitted to operation and removed with the least possible delay after its discovery, because of the uncertainty of its nature. 3. Ovarian cysts should invariably be removed entire, without being tapped or punctured, the abdominal incision being prolonged to the necessary extent. The risk of sowing malignant cells broadcast and implanting them on the peritoneal surface, where they may proliferate luxuriantly, is thereby avoided. 4. During the operation of ovariotomy the ovarian pedicle should be ligatured and cut through as near the uterus—that is to say, as far away from the diseased tissues—as possible. Nothing in the nature of conservative surgery is permissible in dealing with ovarian cysts.

Journal of Tropical Medicine, London.

May 2.

27 Diphtheria in the Tropics. Aldo Castellani.
28 Deeply Placed Cervical Tumor; Enucleation; Recovery. J. Wishart Kerr.
29 Cold Weather Notes on Mosquitoes from the United Provinces, India. (Concluded.) G. M. Giles.

Bulletin de l'Académie de Médecine, Paris.

30 (LXVIII, No. 16.) *Extraction of Pin from Remote Bronchial Tube. J. Garel. Abstract.
31 *Causes et prophylaxie de l'anémie des mineurs. P. Fabre (Commentry).
32 *Observations de lombricose aux colonies. Kermorgant.
33 *Cocaine locale en chirurgie abdominale. Chaput.
34 *Castration ovarienne dans les cancers inopérables de la mamelle (breast). Reynès (Marseilles).

30. **Extraction of Pin from Bronchial Tube.**—A young woman aspirated a steel pin with a glass head, and all attempts to remove it from the air passages failed. Three months later Killian's bronchoscope was introduced through a tracheotomy opening and the pin was seen in a bronchial tube of the third order, the point upward. It could not be dislodged with the magnet, but it was seized with the forceps through the bronchoscope and drawn out with it. The grasp of the forceps was relaxed as the head of the pin was brought outside the wound, when a deep inspiration drew it in once more, and a second introduction of the bronchoscope and forceps was necessary for its final extraction. Three attempts to introduce the bronchoscope through the tracheotomy opening had been made during the month preceding this successful intervention, but a reflex arresting the respiration occurred each time and compelled the postponement of the operation. This is the second case published in France of the successful use of the bronchoscope.

31. **Miners' Anemia.**—Fabre's views are the crystallized conclusions of thirty-two years of practice among miners. He has already published sixteen communications on the hygiene and pathology of miners, some of which were read at congresses. He thinks the term "miners' anemia" is misleading, as miners are not subject to any special form of anemia. They are, however, exceptionally exposed to causes which tend to impoverish the blood. These causes are both general and professional, and besides these there are predisposing influences, individual or congenital, or acquired from defective hygiene, excesses of all kinds, inadequate food, unhealthy houses, and the pathologic anemia from preceding chronic affections, rheumatism or the presence of helminths, tapeworm, ascarides or ankylostoma. He has never observed but a single case of ankylostomiasis. Prophylaxis should consist in supplying fresh air to the miners when at work, in individual hygiene and suitable nourishment, avoiding excesses and overexertion of

all kinds and prevention of accidents. In the discussion that followed it was stated that the assertions that France was free from ankylostomiasis had been disproved by Calmette's recent investigations. A committee was appointed, composed of Laveran, Blanchard, Chantemesse and Roux, to study the subject.

32. **Round Worms as Cause of Disease in the Tropics.**—Kermorgant gives the details of 10 cases reported from various parts of the French colonies, in which the ascaris lumbricoides caused a vague febrile state or complicated typhoid or other diseases. In several instances the worms caused serious lesions in the intestines, obstruction or perforations in some cases, or by finding their way into the liver or biliary passages induced abscess formation. In one case these parasites were found in the intestines, stomach and one ventricle. As diluted feces are used to fertilize vegetables, Europeans as well as the natives are subject to this "lumbricosis," as he calls it, which is very liable to be mistaken for malaria.

33. **Local Cocain in Abdominal Surgery.**—This and the following article are published only by title in the *Bulletin*, but our Paris exchanges of the same date, April 20, give abstracts of them. Chaput reported that he has performed twenty-five major operations on the abdomen with local cocain anesthesia alone. The list includes ovariotomies, gastroenterostomies, hysterectomies, appendicectomies, etc. If the subject is timid and general anesthesia has to be induced after all, the previous use of the cocain does not interfere with it in any way.

34. **Ovarian Castration in Inoperable Cases of Cancer of the Breast.**—Reynès presented a patient, 33 years old, whose breasts showed a slight cicatricial thickening and induration. A year before she had a large ulcerating and inoperable epithelioma on each breast and was already cachectic. One of the tumors had been developing for nine years, the other for three. He removed both ovaries and the tumors began to retrogress at once. In two months one had entirely healed over, and the other soon followed. A similar result has been observed in another case, in which the tumors are rapidly retrogressing. The physiologic relations between the ovaries and the breasts explain the influence of castration in these cases, but of course this influence would not be appreciable outside of the period of full sexual activity.

Semaine Médicale, Paris.

35 (XXIV, No. 17.) *La tuberculose intestinale comme cause d'invagination. L. Bérard.

35. **Tuberculosis as Cause of Invagination.**—Five cases have been published and Bérard has had occasion to observe 2 more, in which a tuberculous affection of the intestines induced invagination. Four of these 7 cases were in children, and he refers to the remarkable recuperative power of children as an argument against very radical intervention in such conditions. He has had a patient with multiple tuberculous strictures in the intestine recover complete health after a mere laparotomy with detachment of a few adhesions. Nothing was done to the six strictures that could be observed in the ileum, and they have all retrogressed since. Other French writers have published cases of recovery from hypertrophic tuberculosis of the cecum after mere laparotomy. If the tuberculous affection is not very extensive nor the stenosis very pronounced, simple reduction of the invagination with ileo-cecopexy is liable to be followed by a complete cure. One of his patients died, the other recovered after this intervention. The symptoms in the latter case had been attacks of colic, followed by vomiting of greenish matter, the maximum of pains around the umbilicus. These symptoms subsided after a week, leaving dull pains and tenacious diarrhea with traces of blood in the stools. Palpation the third week revealed a zone of tenderness, resembling a patch of inflammation of the omentum, most pronounced when the rectus muscles were most relaxed. There was also resistance to pressure, most marked toward the right iliac fossa, but not painful. Temperature normal.

Archiv f. klinische Chirurgie, Berlin.

Last indexed page 743.

36 (LXXII, No. 3.) *Experimentelle Untersuchung über die Anastomosen-Bildung am Vas deferens. W. Bogoljuboff (Kazan).

37 *Der Nervus facialis in Beziehung zur Chirurgie. P. Bockenheimer (Berlin).

38 *Stones in Urethra and Its Diverticula. J. Englisch (Vienna).—Ueber eingelagerte und eingesackte Steine der Harnröhre.

39 Military Surgery, 1687-1693. Zaudy.—Kriegschirurgisches aus der Zeit des Grossen Kurfürsten.

40 *Ileus Due to Movability of Ascending Colon. G. Ekehorn.—Die anatomische Form des Volvulus und Darmverschluss bei beweglichem Coeko-Colon ascendens.

41 *Remote Results of Uranoplasty. E. Ranzi and C. Sultan.—Zur Frage der Enderfolge der Uranoplastik.

42 Thirty-five Cases of Side-to-side Anastomosis and Exclusion of Intestine. H. Haberer.—Anwendung und Resultate der seit April, 1901, an v. Eiselsberg's Klinik in Wien ausgeführten lateral Enteroanastomosen, nebst einem Anhang über die seit derselben Zeit ausgeführten totalen Darmausschaltung.

43 *Ueber eine praktische Sehnennaht (tendon suture). F. A. Suter (Geneva).

44 Elastic Fibers in Bone Regeneration. H. Grohé (Jena).—Die elastischen Fasern bei der Knochenregeneration.

45 Mechanical Displacement of Omentum. J. Bakes.—Zur Frage der mech. Netzverlagerungen bei Trendelenburg'scher Position.

36. **Anastomosis of Vas Deferens.**—THE JOURNAL has previously referred to the successful anastomosis of the vas deferens in Razumowsky's experimental research on large animals. The technic which offers the greatest advantages is the establishment of anastomosis between the vas deferens and the head of the epididymis or the upper half of the body of the epididymis. The permeability of the passage is soon restored, the anastomosis in some cases allowing the passage of sperma.

37. **The Facial Nerve in Surgery.**—In operating in the region innervated by the facial every effort must be made to avoid injury of the ramus maximus marginalis mandibulæ and of the rami zygomatico temporalis. In case injury of the latter is unavoidable the middle of the zygomatic arch and the region of the eyebrow and to the middle of the arch must be avoided, as here run the principal nerves for the upper part of the M. orbicularis oculi, and also for the M. corrugator supercilii, which it is particularly important to leave intact. The ramus collo mandibularis is comparatively unimportant, as it is inconstant and as, besides, it is not the only nerve that supplies the muscles of the lower lip. The anatomic conditions are shown in a number of diagrams and some of the various surgical modes of technic are illustrated.

38. **Urinary Calculi Below the Prostate.**—Englisch devotes several pages to a compilation of the literature on the subject of stones impacted in the urethra or in a diverticulum from it, a total of 405 cases. He classifies them in various groups and discusses each in turn. In 5 instances the subject was less than a year old; in 23 less than 2 years; in 92 under 10; in 35 between 10 and 15; in 22 between 16 and 20; in 41 between 20 and 30; in 39 between 30 and 40; in 81 the age was not mentioned. The stones were in the pars membranacea in 149 and in the pars bulbosa in 68.

40. **Volvulus and Ileus from Movability of Ascending Colon.**—Ekehorn classifies in five groups the large number of instances of this condition which he cites from his own and the experience of others. He discusses the particular features which distinguish the clinical course of each group.

41. **Remote Results of Uranoplasty.**—The results in the 105 cases reported from von Eiselberg's clinic at Vienna were least satisfactory in the children under 2 years old. The 4 deaths that occurred in the 105 cases were also of children under 2. The different technical methods followed are described in detail with the remote results. Systematic exercises to train the voice were of great importance for the final functional result. Normal speech was regained in only 6 of the 64 followed to date. In 44, or 68.75 per cent., the speech was very much improved, but still had a nasal ring, and in 14, or 21.87 per cent., there had been no functional improvement. The anatomic closure was complete in 41.58 per cent. of the total number operated on, and nearly complete in 27.72 per cent.

43. **Practical Tendon Suture.**—A number of advantages are attributed to the method of suturing the tendon here described. A thread is passed through the stump, first forming a narrow U and then an X, the ends then brought together and tied, which gives a remarkably firm hold on the tendon. The two stumps are then tied together, side by side, with these threads,

the stumps overlapping 3 to 4 mm. They grow together, and the constant traction finally pulls them into a nearly straight line, the right-angled outer corner of each cut surface dragged into an angle of about 140 degrees, thus forming nearly a straight line. Experiments on dogs and in 2 clinical cases confirm the complete restitution of the tendon.

Berliner klinische Wochenschrift.

46 (XLI, No. 16.) Beiträge zum Studium der Hematologie. J. Mitulescu (Nothnagel's clinic, Vienna).
47 Ueber die Constitution des Tetanolysins. H. Sachs (Frankfurt a. M.).
48 *Casuistische Beiträge zur Aetiologie der Lipomatose und zur Säurebehandlung des Pruritus nach Leo. F. Köhler.
49 Einwirkung einiger Ionen auf die Zell-Substanz. H. Deetjen.
50 Physiologic Aspect of Clinical Medicine. M. M. Wolkow (St. Petersburg). (Concluded.)
51 *Report of Twenty-fifth German Congress of Balneology, Aix, March 3-7, 1904. (Commenced in No. 15.)
52 *Subcutaneous Feeding. Friedrich (Greifswald). Abstract.
53 (No. 17.) Ueber hyperalgetische Zonen am Halse nach Kopfschüssen (on neck after bullet wounds of head). R. Milner.
54 Influence of Local Application of Cold on Heart Action. W. Krebs (Institute for Hydrotherapy, Berlin).—Einfluss localer Kälteanwendung auf die Herzthätigkeit.
55 *Organo-therapeutische Versuche bei Pankreas-Erkrankung. K. Glaessner and J. Sigel.
56 *Ueber einige neuere Versuche einer Verbesserung der Herzgrenzenbestimmung nebst Bemerkungen über sinusoidale Voltasation. V. Lippert.
57 *Has Success Been Obtained in the Campaign Against Tuberculosis? Ascher (Königsberg).—Beiträge zur socialen Hygiene.
58 *Report of Thirty-third German Congress of Surgery. (Commenced in No. 15.) See page 1241.

48. **Acid Cure of Pruritus.**—Köhler relates that a distressing pruritus in a subject with incipient tuberculosis was cured in five days under the influence of a tablespoonful every two hours of a 3/200 solution of sulphuric acid.

51. **Acute Articular Rheumatism.**—Burwinkel does not regard salicylic medication as an advance in the treatment of articular rheumatism. He prefers to treat it by repose, mild hydriatic procedures and repeated venesection, withdrawing 150 to 300 c.c. of blood at a time.

52. **Subcutaneous Feeding in Surgery.**—Friedrich's later experiences have fully confirmed his previous announcements in regard to the great value of subcutaneous feeding in certain severe gastrointestinal disturbances, in which feeding by the mouth or rectum and also a fistula are contraindicated. His technic is the daily injection of 40 to 100 gm. of grape sugar in a 3, 4 or 5 per cent. solution. He also uses a pure pepsin-peptone, free from albumoses (the chemically pure product being made according to the method devised by Professor Siegfried of the Leipsic Physiologic Institute). Twenty grams of this combination injected subcutaneously are completely utilized by the organism. He gives it in a 7 per cent. solution, with or without the grape sugar. An admirable combination is .2 gm. table salt; 2 g. grape sugar and 4 gm. pepsin-peptone to the 100 gm. water. With this subcutaneous nourishment he has been able to tide patients past the critical period of perforation of the stomach or bowel, or severe peritonitis from any cause.

55. **Organ Treatment of Pancreas Affections.**—A man of 52 was under observation in Ewald's service for several months, the differential diagnosis of his sickness being some affection of the pancreas. The diagnosis was based on the presence of pancreas colics, alimentary glycosuria, fat in stools and impaired digestion of albumin. Administration of thyreoidin had an unfavorable effect. Pancreon displayed a slight influence on the absorption of nitrogen, but none on the absorption of fats. The administration of pancreatin (Rhenania) proved distinctly beneficial. The absorption of nitrogen increased from 52.2 per cent. to 65.7 per cent. and of fats from 40.9 per cent. to 68.5. Alkalines alone caused only a slight improvement in the utilization of nitrogen and fats, but the combination of pancreatin and sodium bicarbonate produced the best effect of all. Five .25 gm. doses of the pancreatin were given during the day accompanied by 30 gm. of sodium bicarbonate, and the absorption of nitrogen increased from 53.1 per cent. to 62 per cent. and of fat from 37.9 per cent. to 69.8 per cent. A number of cases which presented similar symptoms, fatty stools and alimentary glycosuria, have been treated in the same way since, but no benefit was apparent. The postmortem findings in each case disclosed that the trouble had been due merely to isolated atrophy of the small intestine. Consequently the success of organ treatment in cases presenting this syndrome may serve to differentiate pancreatic from other affections. The former are not so rare as generally supposed.

56. **Sinusoidal Alternating Current in Therapeutics.**—Lippert found in his research in this line with 149 observations that the electric baths with the sinusoidal alternating current had a marked effect in increasing the blood pressure, while generally diminishing the pulse rate. This form of electricity has also a stimulating action on the metabolism and on the energy of the heart and other musculature. It also promotes sleep. This effect was unmistakable in cases of arteriosclerosis and in some of simple neurasthenia. French writers have announced that it is beneficial in gynecology.

57. **Has the Campaign Against Tuberculosis Accomplished Anything?**—Ascher marshals the statistics gathered in Prussia, and points out that the decline of the tuberculosis death rate is made up by the increased mortality from acute respiratory affections. The decline in the mortality from both these causes in the German cities with a population of more than 15,000 is misleading, as no account is taken of the influx of population from outside. The decline in the death-rate from tuberculosis had begun before the tubercle bacillus was discovered, and it is greater in the circles in which no efforts have been made to combat tuberculosis than in the country at large. The average age at death of consumptives is growing constantly lower. This fact he attributes to increasing industrializing and crowding of the populace. The increase in the mortality of acute respiratory affections is mainly in children. It may be regarded as a disturbance in the balance between the bacteria normally present in the air passages and the resisting forces of the organism. His researches have convinced him that climatic influences are not an essential factor. He also cites statistics to show that the mortality from infectious diseases is greatest in the country, less in the small towns and least in the cities, while the mortality from respiratory affections and also from congenital debility and atrophy are in inverse proportion. Among the incomprehensible statistics which he cites is the comparative mortality of nurslings from respiratory affections as given in the statistics of typical districts, one a farming region, one a manufacturing center in Silesia and another in a Rhine province. The increase in the mortality from this cause in nurslings has been constant, in the farming district it has been 83 per cent.; in Silesia, 460 per cent., and in the Rhine district, 470 per cent., the figures in the Rhine province being 36.9, 66.1, 122.3, 153.4 and 167—212 per 10,000 inhabitants in the consecutive five-year periods since 1875. There has been no such increase in the mortality from congenital debility and atrophy, consequently accessory causes must be sought, as there are no grounds for assuming a predisposition of this nature. He ascribes to the present faulty methods of hygienic and statistical investigation the fact that this almost incredible increase in the death rate has escaped general attention hitherto. Some of his statistics are derived from MSS. in the archives of the Prussian Bureau of Statistics, the percentages first computed for this article. The first part was published in the *Wochenschrift* last year, No. 44, 1903.

58a. **Fate of Compresses Left in Abdomen.**—Riese had occasion to observe a case simulating an ovarian tumor which proved to be a perfectly encysted foreign body, a compress left from some preceding intervention. He experimented on dogs and found that compresses left in the abdomen might have this fate or might work their way into the intestine and be expelled.

58b. **Artificial Gangrene in Gastrointestinal Operations.**—Wullstein makes an anastomosis between stomach and intestines, between intestine and gall bladder, etc., by invaginating the parts and inducing gangrene by mechanical or thermic irritation or cauterization with carbolic acid. By this means he can perform gastroenterostomy without assistance or any

hemorrhage, and in thirty hours have the part involved duly excluded.

58c. **Bladder Tumors in Anilin Workers.**—Rehn has observed 21 cases of tumors in the bladder among workmen employed in anilin works for five to twenty-nine years. In 3 instances it was a papilloma, but in the 18 others it was either a sarcoma or carcinoma. Eleven of the patients have already died. He urges others to seek for and publish such cases.

Centralblatt f. Bakteriologie, Etc., Jena.

Last indexed page 1391.

59 (XXXV, No. 6.) Studien über Morphologie und Biologie des Milzbrand-Bacillus (anthrax bacillus). H. Preisz (Budapest). (Concluded.)
60 Zur Aetiologie des Gasbrandes (gaseous gangrene). A. Ghon and M. Sachs. Part II. (Continued.)
61 Zur Aetiologie der Gas-Phlegmone. L. Kamen. (Concluded.)
62 Untersuchungen über die Anaerobiosis. C. Fermi and E. Bassu (Sassari).
63 Bakteriologische Untersuchungen beim Erysipel. P. Krause (Breslau).
64 Erreger der toxämischen Hämoglobinurie bei dem Vieh in Kuban (in cattle). E. Djatschenko (St. Petersburg).
65 Nachforschungen und experimentelle Beobachtungen über die Wutkrankheit (rabies). E. Bertarelli and G. Volpino (Turin).
66 Zur experimentellen Lyssa der Vögel (rabies in birds). J. v. Löte (Kolozsvar).
67 Die Tetrabothrien der Säugetiere (of mammals). O. Fuhrmann (Neuchâtel).
68 Structure of Adult Ankylostomum. A. Looss.—Zum Bau des erwachsenen Ancylostomum duodenale.
70 Importance of Puncture of Spleen and Veins for Diagnosis of Typhoid. N. Jancso (Kolozsvar).—Bedeutung der Milz- und Venenpunktur bei der bakteriologischen Diagnose des Typhus abdominalis. (Concluded.)
71 Centrifugalisation and Disintegration in Relation to the Virus of Rabies. J. O. Wakelin Barratt. (Concluded.)
72 Results of Application of Koch's Method of Combating Typhoid. v. Drigalski.—Ergebnisse bei der Bekämpfung des Typhus nach Koch.
73 Ueber die bakteriologische Diagnose des Typhus abdominalis mit Hilfe des v. Drigalski-Conradischen Nährbodens und der Agglutination. B. Lipschütz (Vienna).
74 *A Study of the Disinfectant Action of Hypochlorous Acid, with Remarks on Its Practical Action. F. W. Andrewes and K. J. P. Orton (London). (Concluded.

74. **Powerful Disinfectant Action of Hypochlorous Acid.**—The germicidal power of pure hypochlorous acid, in absence of organic matter, is of the most intense kind. Fully exposed anthrax spores are killed by a 0.01 per cent. solution in one minute. In a strength of 0.001 per cent. it kills the *Staphylococcus aureus* in one minute and the colon bacillus in a strength of 0.0004 per cent. In presence of organic matter it is comparatively inert. A combination of hydrochloric acid with ammonium persulphate for an oxidizing agent, has proved fully the equal of Krönig and Paul's potassium permanganate-hydrochloric acid germicide, while it is more stable and free from the disagreeable staining properties of the latter. In presence of a moderate amount of organic matter it is actually superior to the permanganate mixture. The writers commend the new combination as especially valuable for skin disinfection and sterilization of sponges. The formula is a 3.7 per cent. solution of ammonium sulphate mixed with 1 per cent. of strong aqueous HCl and kept for a few days. The formula for the permanganate mixture is potassium permanganate, 1 gm.; HCl aq. fort. 1.1 c.c. in 98 c.c. distilled water. The parallel formula of the new mixture is ammonium persulphate 3.7 gm.; HCl aq. fort. 1.1 c.c. and 95 c.c. distilled water. The disinfectant properties of various preparations of chlorin are probably due to their hypochlorous acid content. The above mixtures are much more powerful than corresponding strengths of sublimate.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

75 (XXX. No. 18.) History of the Discovery of Immunization Against Tuberculosis. F. Neufeld.—Zur Geschichte der Entdeckung der Immunisierung gegen Tuberkulose.
76 *Principles of Treatment of Short Sight. H. Sattler.—Grundsätze bei der Behandlung der Kurzsichtigkeit. (Commenced in No. 17.)
77 Continuous Rhythmic Spasmodic Contractions of Swallowing Muscles. H. Klien (Flechsig's clinic, Leipsic).—Ueber kontinuierliche rhythmische Krämpfe der Schlingmuskulatur. (Commenced in No. 17.)
78 *Die Infektions-Krankheiten der Universitäts-Kinderklinik in Leipzig und die Grundzüge ihrer Behandlung. Soltmann. (Commenced in No. 17.)
79 *Influence of Radiation on Cell Segmentation. Perthes.—Versuche über den Einfluss der Röntgenstrahlen und Radiumstrahlen auf die Zellteilung. (Commenced in No. 17.)
80 *Experiences in Life Insurance. Guttstadt.—Erfahrungen der Lebensversicherung.
81 Report of German Congress of Surgery, April 4-9, 1904. See ¶ 58.

76. **Principles of Treatment of Short Sight.**—Sattler sets forth the urgent necessity for complete and lasting correction of even slight degrees of short sight. He reviews his long experience at the Leipsic Ophthalmic Clinic and the lessons learned thereby.

78. **Principles of Treatment of Infectious Diseases at Leipsic.**—Soltmann describes the measures used at the clinic for children's diseases. The little patient is isolated and the other children in the family are not allowed to attend school until the patient is entirely well and past the contagious stage, after three weeks in case of measles, six weeks in scarlet fever, four weeks in diphtheria, and in pertussis after all paroxysms have subsided. One to three baths are given daily, according to the severity of the case, from the first day in scarlet fever, with commencing desquamation in measles, and in the other diseases cautiously according to the individual case. Sweating baths and copious sweats are advocated in scarlet fever. The children are kept in bed for three weeks in case of measles, and six weeks in case of scarlet fever. The diet is mainly milk, milk gruels, and milk dishes of all kinds, gelatin soups, cocoa, etc. The special measures for each of these diseases are described in detail.

79. **Influence of Radiation on Cell Segmentation.**—Perthes exposed large numbers of the fertilized ova of *Ascaris megalocephala* to the *x* and radium rays. He found that their results were identical in kind, each causing the ovum to develop into an imperfect, abnormal embryo. The same effect on cell segmentation was observed in plant cells. The phenomena observed indicate that the rays induce the formation of substances in the living cell which in turn injure the chromatin of the nucleus.

80. **Life Insurance Experiences.**—The Gotha Life Insurance Company or "Bank," has recently published its experiences during seventy-five years of existence. The volume is edited by Karup, Gollmer and Florschütz. Among other points they proclaim that they have learned that the copper and bismuth tests for sugar in the urine are worthless unless they give an absolutely negative result. The phenylhydrazin test is unreliable unless supplemented by the microscope, in which case it is exact and reliable.

Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed page 987.

82 (LXXI. Nos. 5-6.) *Experiences with Iodoform Filling for Bone Defects. v. Mosetig-Moorhof (Vienna).—Erfahrungen über die Iodoformknochen-Plombe.
83 *Zur Kenntnis der zentralen Luxation des Oberschenkels im Hüftgelenk (hip joint). J. Arregger (Lucerne).
84 *Achilles Tendon as Cover for Tibia Stumps. Dietel (Trendelenburg's clinic, Leipsic).—Die Bildung tragfähiger Amputations-Stumpfe durch Deckung der Tibia-Säge-Gefläche mit der Achilles-Sehne.
85 *Zur Exstirpation der Beckengeschwülste (pelvic tumors). O. Zeller (Berlin).
86 Exstirpation eines Becken-Melanomes (of pelvis). A. Martina (Graz).
87 *Ueber einige oesophagoskopische Fälle. O. Hartmann (Cassel).
88 *Zentrale Luxation des Schenkelkopfes (of head of femur). Wilms (Leipsic).

82. **Experiences with Iodoform Filling for Bone Cavities.**—Some American writers have already adopted the German term for the Mosetig procedure—"plombierung." It has been fully described in THE JOURNAL and its value as set forth by various writers as, for instance, on page 1506 of the last volume. In this article Mosetig definitely describes his perfected technic, with numerous illustrations, and reviews the experiences of five years with it. The details are given of 79 cases of osteomyelitic affections thus treated, also of 108 tuberculous affections and of 8 others (in 2 plugging the antrum of Highmore, and in 4 plugging dental cysts.) The youngest patient was under 3, the oldest 76. Not a single mishap occurred in any instance. In a few cases of osteomyelitis of the tibia the entire diaphysis had to be removed, and its place was filled with the iodoform filling. One of these patients, a girl of 12, passed through pneumonia the next month and erysipelas six weeks after this, but rapidly recuperated to complete recovery, with no signs of injury from the enormous quantity of the iodoform injected. The iodoform does not become absorbed until its particles are reached by the new growth of bone tis-

sue through the filling, consequently absorption proceeds very slowly. The only indispensable is that the cavity to be filled must extend into sound tissue and be absolutely free from all morbid tissue and germs. The radiograms appended show how the filling constantly diminishes in size until after a year not a trace of it can be detected.

83. **Central Luxation of Hip Joint.**—By this term Arreger means the displacement of the head of the femur through a fracture of the acetabulum, the impact on the trochanter driving the head into the pelvis through the acetabulum. Such accidents are rare, but may be surmised when the limb is found in outward rotation, and reduction is easy and generally painless, but the displacement gradually recurs so soon as the parts are released. Another sign is the shortening of the distance between the symphysis and trochanter and likewise the presence of an experitoneal hematoma, and the protrusion of the head of the femur and the fragments into the small pelvis. The diagnosis is confirmed by intra-abdominal examination through the vagina or rectum and radiography. On account of possible simultaneous injury to bladder and intestines the physical examination must be done cautiously. In mild cases properly treated a new joint develops inside the pelvis from the fragments of the acetabulum, forming a new cap for the head of the femur. Healing is necessarily the work of several months and there is always more or less functional incapacity. In severe cases the accident is always speedily fatal from shock, sepsis or injury of the intestines. Treatment should consist in lateral and lengthwise extension or an immobilizing cast reaching above the costal arch, after reduction. The new acetabulum that formed from the relics of the old was unmistakably apparent in 5 out of the 7 cases of survival on record, and its formation may be accepted as the rule. All the other cases died out of the 23 known of this accident. His bibliography contains no American references. (See Wilms below, ¶88.)

84. **Achilles Tendon Covering for Stumps.**—Dietel gives a photograph of one of the 9 cases treated by utilizing this tendon to cover the stump after amputation of the tibia. The lad is standing on his stump, the other foot raised, as securely as he could stand on the sound foot, and the limb is not so much shortened as by other methods. Other cuts show the details of the technic.

85. **Ablation of Tumors in Pelvis.**—Zeller gives the particulars of a case of fibro-sarcoma-myxomatous-cystic tumor successfully removed from the right sacro-iliac synchondrosis. The patient was a woman of 38, and she has been in good health during the two years since, with no signs of recurrence. He also analyzes the cases on record, including a few from America. The list includes 5 of fibroma, 3 of exostosis, 10 of enchondroma, 3 of sarcoma or a mixed tumor—all the above group pedunculated or easily shelled out. In a second group of broad-based tumors requiring extensive resection of the pelvis, he reviews 6 cases of enchondroma and 31 of sarcoma or a mixed growth. He thinks success depends on early intervention. After cachexia has developed the prospects are much less promising.

87. **Esophagoscopy.**—Hartmann gives a number of the views obtained by esophagoscopy. He prefers the stiff Mikulicz esophagoscope with the Caspar electroscope as the most convenient combination for the purpose.

88. **Central Luxation of Head of Femur.**—Wilms writes that he has seen 4 patients with this accident within three years. All recovered, but as none would submit to proper treatment all were more or less crippled in the use of the leg. The joint became rigid; rotation and abduction were more interfered with than adduction and flexion. All but one find long continued walking painful. Theoretically speaking, he would prefer to reduce the head by flexing the hip joint with slight adduction rather than by mere extension. The position he advocates would prevent redisplacement, by the contact of the shaft against the anterior ring of the pelvis. In one of his cases extension was unable to reduce the head, but flexing the joint with slight adduction easily restored it to its normal place.

Münchener medicinische Wochenschrift.

89 (LI, No. 17.) Action of Fluorescent Substances on Diphtheria and Tetanus Toxins. H. v. Tappeiner and A. Jodlbauer (Munich).—Wirkung fluoreszierender Stoffe auf diphtherie-Toxin und Tetanus-Toxin.
90 Severe Anemia with Hyperglobulia as Result of Chronic Carbonic Acid Intoxication. G. Reinhold.—Ueber schwere Anemie mit Hyperglobulie als Folgezustand chron. Kohlenoxydvergiftung.
91 Ueber so-gen. primäre Pleura-Endotheliome. P. Bonhelm.
92 Ueber die Perforation mit dem von Tridondani angegebenen Perforatorium. K. Frankenstein.
93 *Relations Between Trigeminal Neuralgia and Recurring Corneal Erosions. M. Bartels.—Ueber die Beziehungen zwischen Trigeminusneuralgie und der rezidivierenden Hornhauterosion.
94 Fall von allgemeine entzündlicher Schwellung der Haut (general inflammatory swelling of skin). H. Koerber.
95 *Zur Prognose der Dünndarm-Sarkome (of small intestine). Steinthal.
96 *Inhalation von phenyl-propiol-saurem Natrium gegen Kehlkopf- und Lungen-Tuberkulose. Bulling.
97 Subcutaneous Fracture of Right Clavicle, Secondary Closure of Subclavian Artery, Suture of Bone After Chiseling. Mechanism of Injuries of Vessels in Fracture of Clavicle. Meinhold.—Subkutaner Bruch, etc.
98 Mechanical Treatment of Hernia with Wolfermann Truss. H. Mohr.—Mechanische Behandlung der Unterleibsbrüche, etc.
99 Latest Researches on Pupil Phenomena. von Hippel.—Neuere Untersuchungen zur Physiologie und Pathologie der Pupillen-Phänomene.
100 *Die Diet-Block Commission in Stuttgart. Rosner (Stuttgart).
101 Report of International Congress for School Hygiene, Nuremberg, April 4-9, 1904. (Commenced in No. 15.) See report on page 1242.

93. **Relations Between Trigeminal Neuralgia and Corneal Erosions.**—Bartels relates two typical cases in which an erosion of the cornea was followed by recurring attacks of inflammation. Both patients were subject to trigeminal neuralgia. Study of the cases showed that the recurrence of the corneal irritation was due to the trigeminal affection, and after months of ineffectual treatment of the eye, by addressing treatment to the neuralgia, both patients were promptly and permanently cured. His mode of treating neuralgia is by salicylic medication supplemented by continuous application of linseed poultices to the emerging point of the nerve, and strict repose in bed, the course of treatment ranging from three to eight days, according to the severity of the case. He has found pyramidon useful as an analgesic and also injection of Schleich's No. 2 solution at the emerging point of the nerve to arrest very severe attacks. He advised his patients to carry a salicylate powder constantly with them, to take at the first recurrence of the neuralgia and thus ward off the secondary corneal lesion, but neither has had a recurrence to date.

95. **Prognosis of Sarcoma of Small Intestine.**—Steinthal states that 18 out of the 45 patients with this affection on record were treated by operation and 10 recovered, but nothing is known as to the further fate of 7; Hahn's patient is still living after eight years and Steinthal's 2 patients are both in good health, one three and the other four years after the intervention. The records show that the spindle-celled sarcoma entails stenosis of the intestines very early and thus surgical intervention is sought at an earlier stage than with other forms. One of his cases was a sarcoma of this kind and the other a small-celled, round-celled sarcoma. Both induced stenosis early; the growth was single, and there was no tendency to breaking down. The prognosis of this class of cases is, therefore, less somber than hitherto supposed. An attentive examiner may discover a malignant tumor in the small intestine before it ulcerates and entails secondary dilatation of the intestine.

96. **Sodium Phenyl Propylate in Tuberculosis.**—Löw pointed out a while ago that as cinnamic acid is more bactericidal than phenyl-propylic acid, and as the only difference between their chemical composition is that the cinnamic acid has two atoms less of hydrogen, it follows that by extracting two more atoms of hydrogen the resulting substance would be even more strongly bactericidal. Bulling has been testing this theoretical reasoning in practice, and has found that the premises are correct, and that the third substance—which is a sodium phenyl-propylate—is much stronger in its bactericidal effect than either of the others. His experience compels him to announce that the success obtained with it in treatment of tuberculosis of the lungs and larynx was so striking that it should be given a trial in every case that is not absolutely hopeless

when first seen. He gives the particulars of three cases, and describes his mode of employing the propylate in half-hour inhalations twice a day. The patient places the mouthpiece of the atomizer on his tongue and breathes regularly as usual, without effort. The temperature of the spray is gradually increased from 77 to 86 F. at first to 108 or 109 and in case of a tendency to hemoptysis to 113 F. This heat from the spray induces a passive hyperemia of the air passages which enhances the bactericidal action of the drug. The last few minutes of the inhalation the temperature is reduced again to about 95. After the inhalation the patient keeps still and does not speak for an hour. He gradually increased the strength of the solution to 3 per cent., which he now uses exclusively. The cases described were thus treated for one or two months or longer.

100. **The Stuttgart Diet Discussions.**—For a number of months the physicians of Stuttgart have been engaged on the task of preparing a set of rules for the diet in various diseases. It is the first time that a German medical society has devoted its sessions to discussion of this subject, and three five-hour sessions have resulted in the adoption of a set of rules which will soon be published. They are intended mainly for the working classes.

Wiener klinische Wochenschrift, Vienna.

102 (XVII, No. 14.) *Beiträge zu einer funktionellen Diagnose der Arteriosklerose und zur Differentialdiagnose der Angina pectoris. M. Sihle (Odessa).
103 Fall von Peritonitis mit ungewöhnlicher Grundursache (of unusual etiology). H. Lorenz.
104 Myositis ossificans im Gebiete des Ellbogengelenkes (elbow). O. E. Schulz.
105 *Arbeiten a. dem Gebiete der klinischen Chirurgie (Gussenbauer memorial).
106 (No. 15.) *Serum-Behandlung bei Puerperal Fieber. H. Peham.
107 Zur Agglutination der Streptokokken. T. Zelenski (Cracow).
108 Routes of Infection in Tuberculosis from Feeding. J. Bartel.—Die Infektionswege der Futterungstuberkulose.
109 *Ein neues radiometrisches Verfahren. L. Freund (Vienna).
110 (No. 16.) *5 geheilte Fälle von Nieren- und Blasen-Tuberkulose (of kidneys and bladder). G. Kapsammer.
111 Zur Frage der Sekretions-Thätigkeit der polynukleären Leukozyten. E. Lazar.
112 Ueber Eklampsia gravidarum. A. Szili.
113 Keratosis palmaris arteficialis. R. Matzenauer and A. Brandweiner.
114 Professional Dermatosis in Glass Workers. E. Stein.—Gewerbedermatose bei Glasmachern.
115 (No. 17.) *Gehirn und Syphilis (brain and syphilis). J. A. Hirschl.
116 *Die Behandlung chronischer Arthritis mit Vaselin Injektionen. K. Büdinger (Vienna).
117 *Zur Diagnostik der Coxitis. F. von Friedländer.
118 Fall von Volvulus des Magens (of stomach). F. Pendl.

102. **Functional Diagnosis of Arteriosclerosis and Differentiation of Angina Pectoris.**—Sihle describes extensive research on the blood pressure undertaken by applying the Riva-Rocci apparatus to the brachial artery, the Basch sphygmomanometer to the radial and the Gaertner tonometer to the digital. He made 1,500 different tests on 600 healthy subjects and established the physiologic range of the brachial pressure as 120 to 150 mm. mercury for healthy subjects, while the radial range is from 100 to 140 and the digital from 90 to 110. He did not find the Basch apparatus as reliable as the others. The difference between the brachial and the digital pressure on the same subject was seldom more than 50 mm. In a large number of healthy subjects between 15 and 35 years old the minimal difference was 25 to 20 mm. The difference was greater under the influence of an emotion. In some instances the neuro-muscular apparatus of the vessel walls showed great instability in respect to the influence of emotions. As age encroaches the difference between the pressure in these different arteries increases. The resistance to the passage of the blood is augmenting, the vascular tube becoming stiffer, and a large difference indicates pronounced arteriosclerosis. He announces that the development of sclerous degeneration of the vessels is preceded by a stage in which there is merely enhanced tension of the vessel walls. This early stage of arteriosclerosis has hitherto been beyond the reach of our diagnostic measures, but it is easily detected by this method of combined comparative examination with the Riva-Rocci sphygmomanometer and Gaertner's tonometer, comparing the difference between the findings with the standards established for the normal pressure in the brachial and the digital arteries. This mode of examination not only notes the degree of tension of the vessel walls and the resistance to the circulation offered by the vessel, but it also gives reliable information in regard to the heart action. The stiffer and narrower the vessel, that is, the more advanced the arteriosclerotic process, the greater the difference between the blood pressure findings at these arteries, provided the heart action is still unimpaired. The more relaxed, that is, hypotonic, the vessel wall and the lesser the resistance, the lower the blood pressure and consequently the smaller the difference between the pressure at the brachial and digital. The mean difference between the brachial and digital arteries in middle-aged subjects averages 30 to 40 mm. mercury. When this difference in pressure is permanently 60 mm. or over it positively indicates a sclerotic process. Sclerosis in the arms premises sclerosis in the internal organs also. On the other hand, a normal or subnormal blood pressure in the vessels of the arms with a normal or subnormal "pressure difference" are presumptive evidence against sclerosis of the internal organs. Knowledge of the conditions of arterial pressure and especially of the "pressure difference" is important also in regard to differentiation and prognosis of angina pectoris. He regards this as essentially a reflex neurosis. The radiating pains are principally due to spasm of the vessels. Arteriosclerosis and infectious diseases, la grippe for instance, afford particularly favorable conditions for the development of this neurosis.

105. **Gussenbauer Festschrift.**—A number of works on clinical surgery by pupils of Karl Gussenbauer were collected and illustrated in this *Festschrift* in honor of his sixtieth birthday, but his untimely death renders the volume a memorial. Exner's article on "Sharp Foreign Bodies in Digestive Tract" states that in 154 cases of needles or nails in the digestive tract only 28 terminated fatally, and in only 20 of these was the death due unmistakably to the foreign body. In 35 cases of pieces of glass 22 were passed without having caused trouble. His statistics include only foreign bodies less than 10 cm. in length. He has established a certain protecting mechanism in the alimentary canal against sharp foreign bodies. Büdinger concludes from his experience with 7 cases of tuberculosis of the pubic symphysis that radical extirpation is the only promising treatment, but that this is inapplicable in the more extensive cases. Narath's study of "Congenital Luxation of the Hip Joint" is based on 150 cases followed for years. He advocates firm fixation with abduction to at least 90 degrees and rotation outward during the first cast period—three months. He describes certain modifications of the reduction procedures which have proved useful in his hands.

106. **Serum Treatment of Puerperal Fever.**—Peham relates that the experiences at Chrobak's clinic with Marmorek's serum were not favorable, but that Paltauf's antistreptococcus serum has shown an unmistakably beneficial action. It is derived from horses inoculated directly with fresh streptococcus cultures from puerperal processes and other severe streptococcus infections in man, with no passage through animals. Twenty-six cases of puerperal infection were injected with the Paltauf serum and all those patients with pure streptococcus infection rapidly recovered, including one case of puerperal peritonitis In the cases in which no benefit was apparent bacteriologic investigation showed that the infection was due solely to the colon bacillus or pneumonia germ.

109. **Dosage in Radiotherapy.**—On page 804 THE JOURNAL recently described some of the devices presented for this purpose. Freund proposes a radiometer based on the chemical power of the rays to liberate iodin in a solution. He uses a 2 per cent. chloroform solution of iodin, which retains its color in the dark but changes its tint rapidly under the influence of the *x*-rays. This change in tint is a purely chemical oxidizing process capable of mathematical demonstration. Test tubes 1 cm. in diameter are filled with 5 c.c. of the solution and after six minutes of exposure to a medium soft Röntgen tube—an intensity corresponding to that required for fluoroscopy of the thorax of an adult at a distance of 1.5 meters—he found that .59 mg. iodin were liberated. This imparted a distinct purplish tint to the fluid. Twelve minutes under the

same conditions liberated exactly twice this amount of iodin and eighteen minutes exactly three times the amount. He accepts the above as the unit for comparison. For weaker applications of the *x*-rays he accepts .35 mg. iodin per 5 c.c. of the solution as the standard unit. The test tube is wrapped in black paper and placed on one side of the exposed area.

110. **Cure of Tuberculosis of Kidneys and Bladder.**—Kapsammer's 5 cases show that the freezing-point of the urine is liable to be influenced by reflex polyuria from catheterization of the ureters, and consequently the findings should be read with due caution. In one of his cases there was .5 per 1,000 albumin, while the freezing-point of the urine was —.52 C. and of the blood —.58 C. Notwithstanding these findings he performed nephrectomy; the albumin vanished at once from the urine and the patient soon regained her health. He urges the importance of catheterizing both ureters in establishing the diagnosis, and he always uses the phloridzin and methylene blue functional tests besides. In one of his cases local treatment with sublimate and guaiacol-iodoform cured the extensive tuberculous affection of the bladder while waiting for the nephrectomy. In another case he found it necessary to remove the entire ureter, and in 3 others 18 cm. of it. In one case the ureter was extensively involved while there was only a single small cavity in the kidney. The pelvis of the kidney was dilated and contained 40 c.c. of pure urine with a few flakes of pus; the ureter orifice was obstructed by a tuberculous ulceration evidently due to passage of pus from the cavity. This had in turn induced stenosis, stagnation of urine, uronephrosis and consequent tuberculous pyonephrosis. His experience has convinced him that it is not necessary that the kidney to be left should be absolutely sound. It rapidly recuperates after removal of its diseased mate.

115. **The Brain and Syphilis.**—In the conclusion of this summary of our knowledge on this subject Hirschl mentions that syphilis was not introduced into Bosnia and the South Sea Islands until comparatively recently. The lesions presented by the inhabitants to-day correspond to those observed in Europe at the beginning of the second century of syphilization, that is, about A. D. 1600.

116. **Treatment of Chronic Arthritis with Injection of Vaselin.**—Büdinger lubricates the parts of inflamed joints by injection of sterile vaselin. In mild, chronic cases the results are good in all and sometimes prove very fine. In severe, chronic arthritis considerable improvement is realized in many instances, and in old, inveterate processes in the joints the vaselin proves a valuable adjuvant to other therapeutic measures. These injections certainly accomplish more in several directions than any other mode of treatment. Of course they should not be attempted in a tuberculous process nor in acute exacerbations nor in gonorrheal affections until a long interval after the acute phase. He uses white or yellow vaselin, warmed, preferring the latter, injecting 1 to 2 c.c. in small joints, 3 c.c. in the shoulder and 4 c.c. in the knee. After the injection he manipulates and moves the joint to bring the vaselin in contact with the parts. There is usually considerable pain after the injection, gradually subsiding in two to six days. Sometimes a feeling of numbness is experienced or indications of slight synovitis are noticed, but the benefit from the injections is soon apparent and has been permanent to date. He explains their action as the filling up of unevennesses which maintain irritation or cause pain on movement. The consistency of the vaselin prevents its absorption. In one case he opened the joint forty days after injection of 4.5 c.c. of vaselin and examined a fifth of the fluid accumulated in the joint, finding exactly one-fifth of the amount of vaselin that had been injected. He gives in detail the particulars of the 15 cases thus treated to date, the first dating from July, 1903. One of the great advantages of this treatment is that as the function of the joint is improved the resulting atrophy of the muscles improves with it or its occurrence is prevented.

117. **Diagnosis of Hip-Joint Disease.**—Friedländer shows by four examples that the characteristic attitude assumed from the first by the subject varies with the exact location of the lesion. The partial restriction of the conical excursions of the limb involved is also a differential sign, and the initial limitation of movability in a certain direction. In one case the leg was apparently lengthened, slightly flexed and slightly rotated outwards. Flexion, adduction and outward rotation were unimpeded, but extension, abduction and inward rotation caused pain. Radioscopy showed a focus in the joint at the edge of the epiphysis, involving the neck of the femur. The course of the blood vessels renders extension of the process to the head almost inevitable, and he consequently excised the focus. The operation confirmed his assumption of an embolic focus with backward infection of the soft parts. A focus in the other leg had been extirpated previously. In his other cases it was impossible to extend the hip joint or abduct it, while adduction and inward rotation were unimpaired. The foci in these cases were at the insertion of the capsule in the lower circumference of the neck.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE JOHN CRERAR LIBRARY. Ninth Annual Report. For the Year 1903. Paper. Pp. 52. Chicago: Printed by Order of Board of Trustees. 1904.

PROCEEDINGS OF THE EIGHTEENTH ANNUAL MEETING OF THE CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA. Baltimore, Oct. 23 and 24, 1903. Paper. Pp. 84. Providence: Snow and Farnham. 1903.

ROENTGEN RAY DIAGNOSIS AND THERAPY. By Carl Beck, M.D., Professor of Surgery in the New York Post-graduate Medical School and Hospital. With 322 Illustrations in the Text. Cloth. Pp. 460. Price, $4.00. New York and London: D. Appleton & Co. 1904.

MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. Inorganic Substances. By Charles D. F. Phillips, M.D., LL.D. (Abdn. and Edin.), F.R.S., and F.R.C.S. (Edin.). Third Edition. Cloth. Pp. 921. New York, London and Bombay: Longmans, Green & Co. 1904.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION at the Fifty-first Annual Meeting. Held at Mackinac Island, Mich., August, 1903; Also the Constitution and By-laws and Roll of Members. Cloth. Pp. 1103. Baltimore: Published by the American Pharmaceutical Association. 1903.

NEW PATENTS.

Patents issued from April 19 to May 10 of interest to physicians:

758030. Nasal shield. Thomas Carence, Kansas City, Mo.
757806. Disinfecting apparatus. Albert Giersiepen, Remscheid, Germany.
757654. Syringe. Henry M. Guild, deceased, Erie, Pa., N. J. Maxwell, executor, New York.
757807. Physicians' examining and treating couch or table. Charles C. Hazard, Washington Court House, Ohio.
757684. Fan for disinfecting purposes. Wm. W. Rossiter, New York.
757797. Spirometer. Arthur E. Wells, New York.
757854. Eye-shade. Nathan R. Wickersham, West Bethlehem, Pa.
758205. Massage machine. John Graves, Milwaukee, Wis.
758440. Adjustable truss. Maurice O. Hallowell, Conshohocken, Pa.
758092. Ophthalmoscope. Charles McCormick, Chicago.
758597. Vaccine point. Harry K. Mulford, Philadelphia.
758949. Device for storing and administering serums. Wm. S. Apple and H. K. Mundorf, Philadelphia.
759152. Inhaler. George L. Bennett, Chicago.
759084. Surgical operating cushion. Anton C. Eggers, New York, and E. Stahl, Naugatuck, Conn.
759169. Artificial hand. Eli T. Forrester, Deadwood, S. D.
758653. Massage instrument. John A. Howell, Washington, D. C.
758673. Vaginal syringe. Christian W. Meinecke, Jersey City, N. J.
759029. Aseptic drinking cup. John J. Shea, Beverly, Mass.
758719. Inhaler and respirator. John W. Swindell, Greenville, Texas.
759229. Apparatus for testing the eyesight. Adolph and A. C. Bechtold, New York.
759342. Pessary. Frederick H. Brunig, Kansas City, Mo.
759505. Massaging instrument. Martin Doerr, San Jose, Cal.
759808. Treatment of caseïn. Louis A. Dreyfus, New Brighton, N. Y.
759369. Apparatus for administering anesthetics. Augustus G. V. Harcourt, Ryde, Isle of Wight, England.
759612. Infant incubator. George H. How, Chicago.
759714. Spatula and cork extractor. Edwin B. Jelks, Quitman, Ga.
759724. Dispensing cabinet. Jesse Lines, Sabetha, Kan.
759753. Artificial foot. James F. Rowley, Chicago.
759397. Medicament vaporizer. Moritz Saenger, Magdeburg, Germany.
759761. Thermometer case. Hermann A. Sievert, Fort Walla Walla, Wash.